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ՕՏԱՐ ԼԵԶՈՒՆԵՐԻ ԱՄԲԻՈՆ

TECHNOLOGY IN ENGLISH

ԱՆԳԼԵՐԵՆ ԼԵԶՎԻ ՈՒՍՈՒՄՆԱԿԱՆ
ՁԵՆՆԱՐԿ

(տեխնոլոգիական մասնագիտությունների համար)

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Նախաբան

Օտար լեզվի դասավանդման մեթոդիկան մեր հանրապետությունում զարգանում է մի քանի ուղղություններով, որոնցից մեկը և ամենակարևորը մասնագիտական տեքստերի մշակումն է և ուսանողների՝ այդ տեքստերի հետ բառագիտական և քերականական աշխատանքներ կատարելու կարողությունների զարգացումն է օտար լեզվով:

Եռաստիճան բուհական համակարգին անցնելը առաջ է բերել խնդիրներ՝ կապված բարձրագույն դպրոցի համար ժամանակակից պահանջները բավարարող ուսումնական ձեռնարկների ստեղծման հետ: Մեր կողմից փորձ է արված լրացնելայդ բացը Հայաստանի ազգային ազրարային համալսարանում սովորող ուսանողների համար:

Տեխնոլոգիական ֆակուլտետի ուսանողների համար նախատեսված <<Technology in English>> ձեռնարկը բաղկացած է մի քանի բաժնից և հավելվածից: Բաժինները կազմված են ըստ մասնագիտությունների՝ պարենամթերքի, գինու, հացի, մսի, կաթի, կաթնամթերքի և այլն: Հավելվածում ընդգրկված են այն մասնագիտական տերմինների թարգմանությունը, որոնք առնչվում են հիմնական տեխնոլոգիական պրոցեսների հետ:

Ձեռնարկը պարունակում է տարբեր աստիճանի դժվարության տեքստեր և վարժություններ, որոնք այնպես են կազմված, որ ամրապնդեն նաև նախորդ կյուրթը, իսկ բովանդակության առումով լինեն բավական հետաքրքիր:

Յուրաքանչյուր հաջորդ դասը ուսանողին հրամցվում է ավելի բարդ խնդիրներով ու հանձնարարություններով, որը նպատակ ունի զարգացնել նրա անգլերեն լեզուն մասնագիտական լեզվի բնագավառում:

Ձեռնարկում տեղ են գտել նաև բանավոր հաղորդակցման հմտություններ, զարգացնող վարժություններ:

Ձեռնարկը նախատեսված է բարձրագույն ուսումնական հաստատություններում տեխնոլոգիա ուսումնասիրողների, ինչպես նաև տարբեր գործարարական դասընթացներին մասնակցողների համար:

Ինչպես նմանատիպ ցանկացած աշխատանք, այնպես էլ ներկա ձեռնարկը չի կարող լրիվ գերծ լինել թերություններից, ուստի ձեռնարկի հետ կապված բոլոր օգտակար դիտողությունները սիրով կընդունվեն և հաշվի կառնվեն հետագա աշխատանքի ընթացքում:

UNIT 1
FOOD SCIENCE



Lesson 1

Vocabulary

harvest	բերքահավաք
slaughter	սպանդ
nutrition	սնունդ
shelf- life	պահպանման ժամկետ
applied science	կիրառական գիտություն
microbiology	մանրէակենսաբանություն
chemical	քիմիական
biochemistry	կենսաքիմիա
food safety	սննդի անվտանգություն
food microbiology	սննդի մանրէակենսաբանություն
food preservation	սննդի պահպանում
product development	մթերքի կայացում
sensory analysis	զգայաբանական անալիզ
food chemistry	սննդի քիմիա

Food science

Food science is a study concerned with all technical aspects of food, beginning with harvesting or slaughtering, and ending with its cooking and consumption, an ideology commonly referred to as "from field to fork". It is considered one of the life sciences and is usually considered distinct from the field of nutrition.

Activities of food scientists include the development of new food products, design of processes to produce these foods, choice of packaging materials, shelf-life studies, sensory evaluation of the product with trained expert panels or potential consumers, as well as microbiological and chemical testing. Food science is a highly interdisciplinary applied science. It incorporates concepts from many different fields including microbiology, chemical engineering, and biochemistry.

Some of the sub disciplines of food science include:

- Food safety – the causes, prevention and communication dealing with food borne illness
- Food microbiology – the positive and negative interactions between micro-organisms and foods
- Food preservation – the causes and prevention of quality degradation
- Food engineering – the industrial processes used to manufacture food
- Product development – the invention of new food products
- Sensory analysis – the study of how food is perceived by the consumer's senses
- Food chemistry – the molecular composition of food and the involvement of these molecules in chemical reactions
- Food physical chemistry- the study of both physical and chemical interactions in foods in terms of physical and chemical principles applied to food systems, as well as the application of physicochemical techniques and instrumentation for the study and analysis of food
- Food packaging – the study of how packaging is used to preserve food after it has been processed and contain it through distribution
- Molecular gastronomy – the scientific investigation of processes in cooking, social & artistic gastronomical phenomena
- Food technology – the technological aspects
- Food physics – the physical aspects of foods (such as viscosity, creaminess, and texture)
- Food physical chemistry- physical and chemical aspects of food, structure-functionality relationships in food.

1. Answer the following questions

1. What is food science?
2. Which are the main subdisciplines of food science?
3. What is food safety?
4. What is food microbiology?
5. What is physical chemistry?
6. What is food packaging ?
7. Which are the main activities of food scientists ?
8. What is implied by the phrase “from field to fork”?
9. Do you know other subdisciplines of food science?

2. Give explanation of the following words and use them in the sentences of your own.

Harvesting, slaughtering, nutrition, technology, chemistry, packaging, shelf-life, consumption, food borne, investigation, gastronomical.

3. Match the expressions with their meanings.

Food chemistry	the study of how packaging is used to preserve food
Food physics	molecular composition of food
Food packaging	the positive and negative interactions between micro-organisms and food
Food microbiology	the study of how food is perceived by the consumer's senses
Sensory analyses	the physical aspects of foods

4. Put the verbs into the correct tense form

1. Mary (to give) me the book that I asked for.
2. He (to have) that car for very long. It still looks new.
3. She always (to say) she's happy when I ask her.
4. They (to sing) with the choir on Wednesday evenings.
5. We (to win) every game so far this year, but we still have two more to play.
6. My jacket is still wet. I (to come) in out of the rain.
7. I'll have to call you later; I (to do) my homework now.

5. Choose the correct pronoun

1. I tried to borrow (some/ any) money from him.
2. He never makes (some/ any) mistakes.
3. He didn't meet them (somewhere/ anywhere) in Europe.
4. Do you know (somebody/ anybody) in this room?
5. You can take (any/ some) book you like.

6. Choose the right word.

A scientist's job is to do research. Many scientists try to find new and better ways of doing things. For example, scientists who work in the medical/pharmaceutical (*industry/zone*) try to (*develop/deploy*) new, more effective ways of treating various illnesses. Scientist who work in agriculture try to make agricultural processes more (*efficient/affected*). Many scientists work in (*labs/laps*) (= laboratories), where they do most of their research. They often (*public/publish*) their findings in various scientific magazines, journals, etc. A successful scientist will most likely receive (*funding/founding*) (= financial support) to continue doing research. Many scientists work in the private (*sector/section*) (= for corporations, companies, etc.), because of the financial (*benefits/goods*) of working for such companies. The "scientific method" refers to the usual (*chances/steps*) a scientist takes in (*conjuring/conducting*) (= doing) research.

7. Summarize the text

Lesson 2

Vocabulary

storage

պահպանում

food borne illness

սննդային հիվանդություն

health hazards

առողջության վտանգ

food labeling

սննդի պիտակավորում

hygiene

հիգիենա

food additives

սննդի հավելումներ

pesticide

թունաքիմիկատ

biotechnology

կենսատեխնոլոգիա

certification

սերտիֆիկացում

import

ներմուծում

export

արտահանում

food poisoning

սննդային թունավորում

WHO

ՀԱԿ

pathogen

պաթոգեն

food safe symbol

սննդի անվտանգության խորհրդանիշ

carcinogenicous

քաղցկեղածին

toxic

թունավոր

Food safety

Food safety is a scientific discipline describing handling, preparation, and storage of food in ways that prevent food borne illness. This includes a number of routines that should be followed to avoid potentially severe health hazards. The tracks within this line of thought are safety between industry and the market and then between the market and the consumer. In considering industry to market practices, food safety considerations include the origins of food including the practices relating to food labeling, food hygiene, food additives and pesticide residues, as well as policies on biotechnology and food and guidelines for the management of governmental import and export inspection and certification systems for foods. In considering market to consumer practices, the usual thought is that food ought to be safe in the market and the concern is safe delivery and preparation of the food for the consumer.

Food can transmit disease from person to person as well as serve as a growth medium for bacteria that can cause food poisoning. In developed countries there are intricate standards for food preparation, whereas in less developed countries the main issue is simply the availability of adequate safe water, which is usually a critical item. In theory, food poisoning is 100% preventable. The five key principles of food hygiene, according to WHO, are: Prevent contaminating food with pathogens spreading from people, pets, and pests.

1. Separate raw and cooked foods to prevent contaminating the cooked food.
2. Cook food for the appropriate length of time and at the appropriate temperature to kill pathogens.
3. Store food at the proper temperature.
4. Do use safe water and cooked materials

Food safe symbol - The wine glass and fork symbol.



The international symbol for food safe material is **a wine glass and a fork** symbol. The symbol identifies that the material used in the product is safe for food contact. This includes food and water containers, packaging materials, cutlery etc. The regulation is applicable to any product intended for food contact whether it is made of metals, ceramics, paper and board, and plastics. Use of the symbol is more significant in products which should be explicitly identified whether food safe or not, i.e. wherever there is an ambiguity whether the container could be used to hold food stuff.

Even though the legal requirement in various nations would be different, the food safe symbol generally assures these:

1. That the container surface is free of any toxic contaminants which could be contacted from the manufacturing process.
2. That the material the container is made of shall not potentially become a source of toxic contamination through usage (degeneration). This is assured by estimating and regulating the 'migration limits' of the material. In EU regulation, the overall migration is limited to 10 mg of substances/dm² of the potential contact surface. The specific migration for various materials would be different for different temperature levels (of food as well as storage) and for different food items depending on variables such as pH of the food stuff. The toxicity considerations of a specific material may include the carcinogenicity of the substance. The regulations governing these aspects may vary in different nations.

1. Answer the questions

1. What is food safety?
2. How does the process of food poisoning take place?
3. Which are the key principles of food hygiene?
4. What does the food safe symbol identify?
5. What does the food safe symbol assure?

2. Explain the meaning of the following expressions

food borne illness, health hazards, food additives, toxic contamination, appropriate temperature, to kill pathogens, certification systems, food hygiene, food additives and pesticide residues.

3. Match the words

contamination	toxic
poisonous	mark
key	pollution
symbol	core
estimate	component
important	assess
element	significant
dry	restricted
moist	arid
limited	humid

4. Choose the right word.

A teacher's job is to teach someone - to help someone learn about something. Many teachers work in schools - (*primary/prime*) schools, middle schools, and high schools. At the university/college (*level/area*), teachers are known as (*professors/deans*). Teachers often have to create tests/exams for their students. This is a good way of (*monitoring/metering*) (= following) their students' progress. Teachers often (*grade/value*) their students, based on how well or poorly the students (*performance/perform*). A good teacher should be (*patience/patient*), and should be able to explain things in a clear way. In North America, teachers have to be licensed, which usually means that they have to (*finish/graduate*) from college/university and (*compel/complete*) a teacher training (*program/ritual*) before being able to teach.

5. Give the degrees of comparison of the following adjectives.

Dangerous, toxic, easy, good, little, old, interesting, poisonous, few, many, significant, big, bad, high, difficult.

6. Put the verbs into the correct tense form

1. When I (to come) home, my little sister (sleep).
2. When mother (to come) home, I to do my homework.
3. When I (to get up), my mother (to drink) tea.
4. I (to do) already my homework.
5. He just (to come) home.
6. He (to come) home an hour ago.
7. We (not to solve) this problem yet.

8.Nick(to play) football yesterday.

9.I (to prepare) my lessons from 5 till 7 yesterday.

10.I never (to be) to London.

7.Summarize the text

Lesson 3

Vocabulary

danger zone	վտանգավոր գոտի
Food Safety and Inspection Service (FSIS)	սննդի անվտանգության և տեսչության ծառայություն
gastroenteritis	գաստրոէնտերիտ
influenza	հարբուխ
vomiting	փսխում
diarrhea	փորլուծություն
hazardous	վտանգավոր
immune system	իմունային համակարգ
to consume	սպառել
contaminated food	աղտոտված սնունդ
cell	բջիջ
to prevent	կանխարգելել

Danger zone

The temperature range in which food-borne bacteria can grow is known as the **danger zone**. Food safety agencies, such as the United States' Food Safety and Inspection Service (FSIS), define the danger zone as roughly 4–5 to 60 °C (39–41 to 140 °F). The FSIS stipulates that potentially hazardous food is not stored at temperatures in this range in order to prevent food borne illness (for example, a refrigerator's temperature must be kept below 40 °F (4 °C), and that food that remains in this zone for more than two hours should not be consumed. Food borne microorganisms grow much faster in the middle of the zone, at temperatures between 21 and 47 °C (70 and 117 °F).

Food-borne bacteria, in large enough numbers, can cause so-called food poisoning, symptoms similar to gastroenteritis or "stomach flu" (a misnomer, as true influenza primarily affects the respiratory system). Some of the symptoms include stomach cramps, nausea, vomiting, diarrhea, and fever. Food-borne

illness becomes more dangerous in certain populations, such as people with weakened immune systems, young children, the elderly, and pregnant women. In Canada, there are approximately 11 million cases of food-borne disease per year. These symptoms can begin as early as shortly after and as late as weeks after consumption of the contaminated food.

Time and temperature control plays a critical role in food safety. To prevent time-temperature abuse, the amount of time food spends in the danger zone must be minimized. A logarithmic relationship exists between microbial cell death and temperature: a significantly large number of cells may survive slightly lower temperatures. In addition to reducing the time spent in the danger zone, foods should be moved through the danger zone as few times as possible when reheating or cooling.

Foods that are potentially hazardous inside the danger zone:

- Meat, fish, poultry
- Eggs and other protein-rich foods
- Dairy products
- Cut or peeled fresh produce
- Cooked vegetables, beans, rice, pasta
- Shellfish
- Sauces, such as gravy
- Sprouts
- Any foods containing the above, e.g. casseroles, salads, quiches

1. Answer the questions

1. What is a danger zone?
2. What can food borne bacteria cause?
3. When does food borne illness become more dangerous?
4. What plays a critical role in food safety?
5. What foods are more hazardous inside the danger zone?

2. Choose the right word.

A doctor, also known as a (*physician/physique*), helps people when they are sick. There are many different kinds of doctors who (*specialize/specify*) in various fields of medicine. Some work in hospitals, while others work in private (*locations/clinics*). In most countries, doctors (*make/take*) very good money. It is a highly respected profession, and many small children say they hope to become doctors when they (*throw/grow*) up. In many parts of the world, the doctor that most people see first is called a "general practitioner". He or she will often (*examine/excavate*) a patient to see what's wrong. After determining the cause of the patient's (*ill/illness*), the doctor can (*prescribe/prevent*) medicine to help the

patient feel better, or refer the patient to a (*special/specialist*). All doctors have to go through many years of (*medicine/medical*) college in order to become (*qualified/quantified*) to work.

3. Put one word from the box into each gap in the sentences below.

spread poultry stir leek veal cutlery vinegar fried saucer boiled bowl
dessert

We mostly eat soup from a

Knives, forks and spoons are collectively known as

Coffee is served in a cup; under the cup there is usually a

If potatoes are cooked in water, we say they are potatoes.

If we cook something in oil, we say it is

In Britain, most people put salt and on their fish and chips.

We use a teaspoon to our tea or coffee.

Most people butter or margarine on their bread.

Meat from chicken and turkey is known as

A is a type of vegetable.

After the main course we often have a.....

The meat of young cattle is called.....

4. Make up a question.

1. Time and temperature control plays a critical role in food safety (What..)
2. In Canada, there are approximately 11 million cases of food-borne disease per year.(Where...)
3. The temperature range in which food-borne bacteria can grow is known as the **danger zone**. (What...)
4. People with weak immune system suffer from food borne illness more often. (Who...)
5. We should wash fruit and vegetables thoroughly to prevent food borne illness.(Why..)

5. Translate into English

Սննդի անվտանգության և տեսչության ծառայություն, իմունային համակարգ, կանխարգելել, աղտոտված սնունդ, վտանգավոր գոտի, փսխում, սննդային թունավորում, սննդային հիվանդություն, սննդի պիտակավորում, սննդային հավելումներ, բիոտեխնոլոգիա, ներմուծում, սերտիֆիկացում, արտահանում

6. Make the sentences passive

1. She hasn't made this mistake before.
2. The waitress brought me a cup of tea.
3. They took to the doctor yesterday.
4. The students are writing a dictation now.
5. I must write a letter to him now.
6. Tim will bring the bags tomorrow.
7. We are planting some apple trees now.
8. I have already given him my new address.

7. Summarize the text

Lesson 4

Vocabulary

preservation	պահպանում, պահում
decay	փտում, նեխում
radiation	ճառագայթահարում
pest	վնասատու, մակաբույծ
famine	սով
surplus	ավելցուկ
curing	մշակում (աղադրում, պահածոյացում)
canning	պահածոյացում
freezing	սառեցում
drying	չորացում
additive	հավելանյութ
irradiation	իռադիացիա, ճառագայթում
aseptic packaging	ասեպտիկփաթեթավորում
sodium nitrate	նատրիումիմիտրատ
sodium nitrite	նատրիումիմիտրիտ
contract	չեզոքացնել
apply	կիրառել
cancer	քաղցկեղ

Food preservation

Food preservation is term to describe any process used to slow the normal decay of food. There are many forms of food preservation. They range from simple refrigeration to treatment with radiation. Some methods date back to prehistoric times. But other methods have only been developed as a result of modern advances.

Food preservation helped make today's civilization possible. Without it most people would have to grow their own food. Food cannot be transported from rural areas to urban ones without being spoiled or destroyed by pests. As a result, large cities could not exist. In addition, famines would probably be more frequent and widespread because surpluses of food could not be stored to guard against emergencies.

The chief methods of food preservation include: curing, canning, cold storage, freezing, additives, irradiation, aseptic packaging.

Curing

Curing involves the addition of such ingredients as salt, spices, sugar, sodium nitrate and sodium nitrite to food. It is one of the oldest methods of food preservation. Today, curing is widely used in the production of ham, pork, corned beef, and some other meats. It is also sometimes used to preserve fish, potatoes, cucumbers, and certain nuts.

Each of the ingredients that are used for curing acts on food in its own way. Salt slows the growth of microorganisms and removes part of the water from the food. Sugar counteracts the hardening effect of the salt. Sodium nitrate and sodium nitrite help meat keep its red color. Spices are added primarily for flavor.

Curing ingredients are applied to food in several ways. In some cases they are rubbed onto the food. They are also applied by soaking the food in a solution of the ingredients, injecting the solution directly into the food, or mixing the ingredients with the food.

Some studies have shown that certain curing agents may be harmful. For example, too much salt in a diet may cause high blood pressure. Under certain conditions, sodium nitrite may combine with other chemicals to form nitrosamines, which can cause cancer.

1. Give Armenian equivalents for the following:

food preservation; decay of food; prehistoric times; from rural areas to urban ones; destroyed by pests; canning; cold storage; ingredients; one of the oldest methods; widely used; hardening effect; growth of microorganisms; in several ways; they are rubbed onto the food; by soaking the food in a solution of the ingredients, mixing the ingredients with the food.

2. Translate into English

1. Մշակման գործընթացը ընդգրկում է այնպիսի բաղադրիչների ավելացումը, ինչպիսիք են՝ աղը, համեմունքները, շաքարը, սոդային հտրատը և նիտրիտը:

2. Աղը դանդաղեցնում է մանրէների աճը:

3. Չափից ավել աղի օգտագործումը կարող է պատճառ հանդիսանալ արյան ճնշման բարձրացմանը:

4. Պահածոյացումը մթերման ամենահին եղանակներից է:

5. Գոյություն ունեն սննդի պահպանման տարբեր եղանակներ: Դրանցից են պարզ սառեցման մեթոդը և ճառագայթման միջոցով մշակումը:

3. Give synonyms for the following words:

to describe, to slow, decay, preservation, chief, spoiled, frequent, production, flavor, mix.

4. Give antonyms for the following words:

to slow, rural, normal, possible, surplus, old, to act, high, certain.

5. Answer the following questions:

1. What does the term " food preservation " mean?
2. What spoils food during its transportation?
3. Which are the chief methods of food preservation?
4. What does curing involve?
5. How is curing used today?
6. How do different ingredients act on food?
7. In what ways are curing ingredients supplied?

6. Match the words with expressions

- | | |
|---|--------------|
| 1. this is where you choose your food..... | price list |
| 2. this is where you pay for your food..... | counter |
| 3. this tells you what food you can buy each day..... | refrigerator |
| 4. this tells you how much the food costs..... | cash desk |
| 5. this is where the ice creams are kept..... | plate |
| 6. this is where you put your food..... | trash can |
| 7. this gets dirty if you drop things on it..... | cloth |
| 8. this is used to pick up French fries..... | floor |
| 9. this is used to clean the tables..... | fork |
| 10. this is where you dispose of garbage..... | menu |

7. Summarize the text

Lesson 5

Vocabulary

food preservation	մթերքների պահածոյացում
refrigeration and freezing	պաղեցում, սառեցում
canning	պահածոյացում
irradiation	ճառագայթում
dehydration	ջրազրկում
freeze-drying	սուբլիմացիոն չորացում
salting	աղադրում
pickling	թթվեցում, աղադրում,
pasteurizing	մարինացում,
fermentation	պաստեռացում
carbonation	ֆերմենտացում
cheese-making	կարբոնացում
chemical preservation	պանրագործություն
disease-causing bacteria	քիմիական պահածոյացում
enzymes	ախտածին մանրէներ
protein	ֆերմենտ, էնզիմ
chemical reaction	պիտակուց
sterilize	քիմիական ռեակցիա
sealed	մանրէազերծում
inactive	հերմետիկ
	իներտ, պասիվ

How food preservation works

Because food is so important to survival, food preservation is one of the oldest technologies used by human beings. Different preservation techniques commonly used today, include:

- Refrigeration and freezing
- Canning
- Irradiation
- Dehydration
- Freeze-drying
- Salting
- Pickling
- Pasteurizing
- Fermentation
- Carbonation
- Cheese-making
- Chemical preservation
- The basic idea behind all forms of food preservation is either:
- To slow down the activity of disease-causing bacteria
- To kill the bacteria altogether

In certain cases, a preservation technique may also destroy enzymes naturally found in a food that cause it to spoil or discolor quickly. An enzyme is a special protein that acts as a catalyst for a chemical reaction, and enzymes are fairly fragile. By increasing the temperature of food to about 150 degrees Fahrenheit (66 degrees Celsius), enzymes are destroyed.

Even though we see and use many of these technologies every day, we often don't realize how interesting they are. So let's take a look at some of the food preservation technologies that you can find in your home today.

But first a quick word about why food spoils. The basic process is very simple: bacteria invade the food and cause it to rot. Food preservation technology therefore comes in two different forms. Either the technology is trying to slow down the activity of disease-causing bacteria, or it is trying to kill the bacteria altogether and sterilize the food. A food that is sterile contains no bacteria. Unless sterilized and sealed, all food contains bacteria.

Refrigeration

The food preservation technology that we are most familiar with is the refrigeration. It takes the "slow bacteria down" approach. For example, bacteria naturally living in milk will spoil the milk in a few hours if the milk is left out on the kitchen counter at room temperature. By putting the milk in the refrigerator you don't eliminate the bacteria already there, but you do slow down the bacteria enough that the milk will stay fresh for a week or two. The same holds true for fruits, vegetables, meats, etc. that you keep refrigerated. In the case of freezing, the idea is to stop bacterial action altogether. Frozen bacteria are completely inactive, so frozen food lasts for months.

In general, refrigeration has no effect on a food's taste or texture. Freezing has little effect on the taste or texture of most meats, but often completely changes fruits (which become mushy). Refrigeration's minimal effects account for its huge popularity.

1. Answer the following questions

1. Which are the main preservation techniques commonly used today?
2. What is refrigeration?
3. Does refrigeration have any effect on food's taste or texture?
4. Why is it so important to refrigerate products?
5. Which is the main reason of food spoilage?
6. How do you understand the "slow bacteria down" approach?

2. Match the expressions with their meanings.

- | | |
|------------------------|---|
| 1. food safety | 1. the industrial processes used to manufacture food |
| 2. food preservation | 2. processing and preventing the growth of bacteria and other micro-organisms |
| 3. sensory analysis | 3. the invention of new food products |
| 4. product development | 4. the study of how food is perceived by consumer senses |
| 5. food engineering | 5. the causes and prevention of quality degradation of food |

3. Put the verbs into the correct tense form

Ann : Hello, Kate. I am so glad you (to come) at last. Where you (to spend) the morning ?

Kate : I (to be) in the bookstore choosing new books in English.

Ann : It (to rain) still ? It (to be) rather dark in the room.

Kate : No, the rain (to stop)but the wind (to blow).On my way to your place I (to meet) Marry. Do you know her?

Ann : Of course....I know her since childhood. When we were children, we often (to play) together. Where you (to meet) her? I (not to see) her for a long time. What she (to look) like?

Kate : She (to go) to the library when I (to meet) her.

4. Translate into Armenian

food engineering, food preservation, food safety, cheese-making, chemical reaction, refrigeration and freezing, to slow down the activity, by increasing the temperature, disease-causing bacteria, sterilize the food, sensory analysis, at room temperature, frozen bacteria, completely inactive, food's taste or texture, food borne illness, which become mushy.

5.Translate into English.

մթերքների պահածոյացում, պաղեցում և սառեցում, ջրագրկում, սուբլիմացիոն չորացում, թթվեցում, աղադրում, պաստեռացում, պանրագործություն, քիմիական պահածոյացում, ախտածին մանրէներ, սպիտակուց, քիմիական ռեակցիա, ստերիլիզացնել, հերմետիկ:

6.PUT THE ADJECTIVES INTO THE CORRECT DEGREE.

- 1.He is (good) dancer in the world.
- 2.This film is as (long) as the one we saw yesterday.
- 3.Those chocolates are (tasty) than these.
- 4.That ticket is (expensive) than that one.
- 5.This is the (large) picture I have ever seen.
- 6.When the temperature is (high) than 120 degree the enzymes are destroyed.
- 7.Fresh fruits are (tasty) than frozen ones.
- 8.The thinner you cut (little) the experiment will take.

7.Summarize the text

Lesson 6

Vocabulary

moisture	խոնավութիւն
raisins	չամիչ
pea	դլոռ
tray	սկուտեղ
tunnel	խողովակ, թունել
drum	թմբուկ
similar	նման
moving belt	շարժվող ժապավեն
chamber	խցիկ
film	շերտ, թիթեղաժապավեն
scrape	քերել
rotation	պտույտ
pulse-combustion	այրում

Drying

Drying uses heat to remove moisture from food. The microorganisms that cause food spoilage require moisture to survive. Once food dries to the point where most of its water is gone, microorganisms cannot grow and cause food to spoil.

Raisins, peas, soups, milk, eggs, mushrooms and hundreds of other foods are dried. A great variety of drying techniques are used for these products including 1) sun drying, 2) tray drying, 3) tunnel drying, 4) spray drying, 5) pulse-combustion drying, and 6) drum drying.

Sun drying consists of spreading food in thin layers under the sun. Fruits and grains are often dried in this manner. Tray drying uses the circulation of hot air through large insulated cabinets to dry food. Tunnel drying is similar to tray drying, but the cabinet is longer. Food moves continuously through the tunnel dryer on a cart or moving belt.

Spray drying involves spraying liquids or slurries (mixtures of liquids and finely ground solid particles) into large, heated chamber. Hot air is also blown into the chamber. The hot air dries the food droplets to form powders. Dried milk is one of the products obtained by this method.

Pulse-combustion drying combines heat and powerful sound waves to dry food that cannot be dried by other methods. High-fructose corn syrup is one product dried in this manner. In drum drying, a thin film of food is spread into a heated rotating cylinder called a drum. Food dries on the drum and is scraped off before the drum makes a complete rotation.

1. Translate into Armenian

1. To remove moisture from food.
2. Tray drying uses the circulation of hot air through large insulated cabinets.
3. Spraying liquids or slurries.
4. Air dries the food droplets to form powder.
5. High-fructose corn syrup is a product dried in pulse-combustion method.
6. A thin film of food is spread into a heated rotating cylinder.
7. Food is scraped off before the drum makes a complete rotation.

2. Translate into English

1. Չամիչը, ոլոռը, ապուրների տեսակները, կաթը, ձուն, սունկը և հարյուրավոր այլ մթերքներ չորացվում են:
2. Արևով չորացումը իրականացվում է մթերքի բարակ շերտը արևի տակ փռելու միջոցով:
3. Խողովակային չորացումը նման է սկուտեղային չորացմանը:
4. Թարթող-այրման չորացումը ընթանում է բարձր ջերմաստիճանի և հզոր ծայնային ալիքների համակցմամբ:
5. Թմբուկային չորացման ժամանակ մթերքի բարակ շերտը քսվում է շիկացած պտտվող գլանին:
6. Չորկաթը այս ճանապարհով ստացված արտադրանքներից մեկն է:
7. Պտտվող տաքացած գլանը կոչվում է թմբուկ:

3. Answer the questions:

1. What's the main purpose of heat in drying?
2. What kind of foods are dried?
3. Which techniques are used for these products?

4. What do the microorganisms require to survive?
5. Describe:
 - a) sun drying
 - b) tray drying
 - c) spray drying
 - d) pulse-combustion drying

4. Match the words from the left to their antonyms on the right :

- | | |
|------------------|-------------------|
| 1. moist | 1. remove |
| 2. survive | 2. macro organism |
| 3. spoilage | 3. liquid |
| 4. microorganism | 4. steady |
| 5. rotating | 5. frozen |
| 6. heated | 6. dry |
| 7. keep | 7. preservation |
| 8. solid | 8. die |

5. Choose the right word.

1. She spent (a, the,--) hundred dollars on food yesterday.
2. This is (a, an, the, ---) excellent chance to get a good job.
3. She took (a, the, an,--) six-month computer course.
4. You don't look well. You (should, can, might) see a doctor. (Advice)
5. I don't believe it. It (can't, shouldn't, must) be true. (Impossibility)
6. Whose book is this? – I am not sure. It (must, should, have to) be Anna's. (Possibility)

6. PUT IN PREPOSITIONS.

1. The long hand points the minutes.
2. There are many wide streets this city.
3.the one hand he is very cleverthe other hand very strong.
4. She is very goodEnglish.
5. Sue was very angryme yesterday.
6. Sun drying consists spreading food under the sun.
7. High-fructose corn syrup is the product dried this way.

7. Summarize the text

Lesson 7

Vocabulary

edible	ուտելի, պիտանի ուտելու համար
sequestrants	մեկուսիչ
unsaturated	չհագեցած
process	մշակել, վերամշակել
pickled vegetables	մարինացված բանջարեղեն
iron	երկաթ
copper	պղինձ
citric acid	կիտրոնաթթու
humectant	խոնավացնող նյութ

Additives

Additives are chemicals added to foods prevent spoilage or to increase nutrients. Additives are unsuitable or inadequate. Some additives help to keep foods in edible condition for as long as possible.

These additives include antioxidants and preservatives. Others, such as sequestrants and humectants help foods keep an appetizing appearance.

Many foods contain unsaturated fats, fatty acids on oil-based vitamins. When these compounds combine with oxygen, they change into new compounds.

Often the change results in the formation of harmful flavors and odors or the loss of nutrients.

Antioxidants prevent the original compound from combining with oxygen. The Commonest antioxidants used nowadays are butylated hydroxyanisole (B H A) propyl gallate, and ascorbic acid (vitamin C). Preservatives stop microorganism growth in those foods that cannot be processed by such means as canning or freezing. They are extensively used in bread and other baked goods, pickled vegetables, fruit juices and cheese. Some of the most common preservatives are benzoic acid, ascorbic acid and sulfur dioxide.

Some foods contain tiny amounts of metals, such as iron or copper. These metals cause oxygen to combine with foods and produce changes in color. Sequestrants stop these metals from reacting with food. Common sequestrants include ethylenediamine tetra-acetate (EDTA) and citric acid.

Humectants help retain moisture in such products as bread, cakes. These foods become unattractive and less appetizing as they dry out.

Examples of humectants include glycerol and sorbitol.

1. Give Armenian equivalents for the following:

1. Humectants help retain moisture in such products as bread and cakes.
2. These additives include antioxidants and preservatives.
3. Many foods contain unsaturated fats, fatty acids and oil-based vitamins.
4. Humectants include glycerol and sorbitol.
5. The most common preservatives are benzoic acid, sorbic acid and sulfur dioxide.
6. They contain tiny amounts of metals, such as iron and copper.
7. Sequestrants stop these metals from reacting with food.

2. Give English equivalents for the following :

1. Այս մթերքը դառնում է ոչ գրավիչ և անախորժեղի չորանալուց հետո:
2. Մեկուսացնող և խոնավացնող նյութերը օգնում են սննդամթերքին պահպանել ախորժեղի տեսքը:
3. Նրանք լայնորեն օգտագործվում են հացի և այլ թխվածքների մեջ:
4. Շատ մթերքներ պարունակում են ոչ հազեցած յուղեր, ճարպաթթուներ և յուղային վիտամիններ:
5. Հաճախ փոփոխությունը հանգեցնում է վնասակար համի և հոտի առաջացմանը կամ սննդարարության կորստին:
6. Պահպանիչները կանգնեցնում են մանրէների աճը այն սննդամթերքում, որը չի կարող մշակվել պահածոյացմամբ կամ սառեցմամբ:
7. Որոշ մթերքներ պարունակում են փոքր քանակությամբ մետաղներ, ինչպիսիք են երկաթը կամ պղինձը:

3. Match the words from the left to their synonyms on the right:

edible	to comprise
sequestrants	to treat
to process	eatable
to include	to assist
to help	moisturizer
oil	isolators
humectants	fat

4. Answer the questions:

1. Why are additives added to food?
2. How do some additives help food?
3. What happens when food compounds combine with oxygen?
4. Which are the most common antioxidants used nowadays?
5. Which are the most common preservatives?
6. What kind of metals do some foods contain?
7. Which are the most well-known sequestrants?

5. Choose the right word.

In order to become a licensed pharmacist, one has to graduate from a college of (*pharmaceuticals/pharmacy*) and pass a series of examinations. Some of a pharmacist's duties include (*filling/taking*) prescriptions for customers and (*advising/averting*) customers on which medicine to (*swallow/take*). Pharmacists are health (*professionals/masters*), and they can let you know about any possible (*side/second*)-effects associated with a particular (*medication/medical*) (= medicine). What are some other things that you can ask your pharmacist? You can ask whether or not a particular (*prescription/dosage*) (= amount of medicine) is too high, whether or not it's safe to take something in (*combination/together*) with other medicines, and whether or not there is a cheaper (*alternative/alternate*) to your prescribed medicine.

6.Put the verbs into the correct tense form

- 1.Peter always (to come) to the classes in time.
- 2.He (to send) a letter to his parents next week.
- 3.The teacher (to correct) our mistakes every day.
- 4.The concert (to begin) an hour ago.
- 5.The girls (to play) tennis now.
- 6.When we (to come in) the lecturer (to give) a lecture.
- 7.We just (to translate) the text.

7.Summarize the text

Lesson 8

Vocabulary

canning food	պահածոյացում
can	պահածոյի տուփ
prevent	կանխարգելել
contents	պարունակություն
sealable container	հերմետիկ կոնտեյներ
glass jar	ապակետարա
ultra high temperature (UHT)	ուլտրաբարձր ջերմաստիճան
pasteurization	պաստերացում
texture	կառուցվածք
nutritional	սննդային
dehydrating	ջրազրկում
powdered milk	չոր կաթ
pasta	ուտեստ մակարոնից
air-tight	ոչ օդաթափանց, հերմետիկ
experiment	փորձ, փորձարկում

Canning Food

Since 1825 or so, canning has provided a way for people to store foods for extremely long periods of time. In canning, you **boil** the food in the can to kill all the bacteria and seal the can (either before or while the food is boiling) to prevent any new bacteria from getting in. Since the food in the can is completely sterile, it does not spoil. Once you open the can, bacteria enter and begin attacking the food, so you have to "refrigerate the contents after opening" (you see that label on all sorts of food products -- it means that the contents are sterile until you open the container).

We generally think of "cans" as being metal, but any **sealable container** can serve as a can. Glass jars, for example, can be boiled and sealed. So can foil or plastic pouches and boxes. Milk in a box that you can store on the shelf is

"canned" milk. The milk inside the box is made sterile (using **ultra high temperature (UHT) pasteurization**) and sealed inside the box, so it does not spoil even at room temperature.

One problem with canning, and the reason why refrigeration or freezing is preferred to canning, is that the act of boiling food in the can generally changes its taste and texture (as well as its nutritional content).

Dehydrating Food

Many foods are dehydrated to preserve them. If you walk through any grocery store you may notice the following dehydrated products:

- Powdered milk
- Dehydrated potatoes in a box
- Dried fruits and vegetables
- Dried meats (like beef jerky)
- Powdered soups and sauces
- Pasta
- Instant rice

Since most bacteria die or become completely inactive when dried, dried foods kept in air-tight containers can last quite a long time.

Normally, drying completely alters the taste and texture of the food, but in many cases a completely new food is created that people like just as much as the original!

An Experiment in Freeze-Drying

You probably don't have a good vacuum chamber at home, but you almost certainly have a refrigerator. If you don't mind waiting a week, you can experiment with freeze-drying at home using your freezer.

For this experiment you will need a tray, preferably one that is **perforated**. If you have something like a cake-cooling rack or a metal mesh tray, that is perfect. You can use a cookie sheet or a plate if that is all that you have, but the experiment will take longer.

Now you will need something to freeze-dry. Three good candidates are apples, potatoes and carrots (apples have the advantage that they taste okay in their freeze-dried state). With a knife, cut your apple, potato and/or carrot as thin as you can (try all three if you have them). Cut them paper-thin if you can do it -- the thinner you cut, the less time the experiment will take. Then arrange your slices on your rack or tray and put them in the freezer. You want to do this fairly quickly or else your potato and/or apple slices will discolor.

In half an hour, look in on your experiment. The slices should be frozen solid.

Over the next week, look in on your slices. What will happen is that the water in the slices will sublime away. That is, the water in the slices will convert straight from solid water to water vapor, never going through the liquid state (this is the same thing that mothballs do, going straight from a solid to a gaseous state). After a week or so (depending on how cold your freezer is and how thick the slices are), your slices will be completely dry. To test apple or potato slices for complete drying, take one slice out and let it thaw. It will turn black almost immediately if it is not completely dry.

When all of the slices are completely dry, what you have is freeze-dried apples, potatoes and carrots. You can "reconstitute" them by putting the slices in a cup or bowl and adding a little boiling water (or add cold water and microwave). You can eat the apples in their dried state or you can reconstitute them. What you will notice is that the reconstituted vegetables look and taste pretty much like the original! That is why freeze-drying is a popular preservation technique.

1. Answer the questions

- 1.** What is the main purpose of canning?
- 2.** What are cans mainly made from?
- 3.** Which is the main problem of canning?
- 4.** What kind of dehydrated products do you know?
- 5.** Does drying have any effect on food taste and texture?

2. Match the expressions with their meanings.

Can	not allowing air to enter or escape
Pasteurize	tissue
Powder	rid of disease germs by using the heating method
Airtight	metal container
Experiment	substance that has been crushed, rubbed to dust
Nutrition	test carried out to study and gain new knowledge
Texture	the science of food values

3. Put the verbs into the correct tense form

1. What you (to do) when I (to come) in?
2. When I (to come) to his house, they (to tell) me that he (to leave) an hour before.
3. When I (to leave) home, the snow already (to stop), but a strong wind (to blow).
4. We (to help) the librarian to put the books in the right order for already 3 days, but we arranged only half the books.
5. He said he (to work) for a long time without achieving good results.
6. We already (to write) all our exercises.
7. By the end of the year we (to learn) a lot of special technological terms.

4. Translate into Armenian

Powdered milk, ultra high temperature (UHT), dehydrated products, reconstituted vegetables, for complete drying, the science of food values, crushed, rubbed to dust, purpose of canning, rid of disease germs, heating method

5. Translate into English

Պահածոյացում, պահածոյիտուի, կանխարգելել, պարունակություն, հերմետիկկոնտեյներ, ապակետարա, ուլտրաբարձրջերմաստիճան, պաստերացում, կառուցվածք, ջրազրկում, չորկաթ, ոչօդաթափանց, փոշի, սառնարան

6. Summarize the text

Lesson 9

Vocabulary

salting	աղադրում
pickling	մարինացում
preservation technique	պահածոյացման տեխնիկա
moisture	խոնավություն
inhospitable environment	անբարենպաստ միջավայր
salt-cured	աղով մշակված
country ham	խոզապուխտ
pickled cucumbers	մարինացված վարունգ
acetic acid (vinegar).	քացախաթթու
inhibit bacteria	կանխել բակտերիաների բազմացումը բենզոատ
benzoates (such as sodium benzoate)	
nitrites (such as sodium nitrite)	նիտրիտ
sulphites (such as sulphur dioxide)	սուլֆիտ
antioxidants	հակաօկսիդիչ
ingredient	ինգրիդիենտ, բաղադրիչմաս
label	պիտակ

Salting and Pickling

Salting, especially of meat, is an ancient preservation technique. The salt draws out moisture and creates an environment inhospitable to bacteria. If salted in cold weather (so that the meat does not spoil while the salt has time to take effect), salted meat can last for years. You can read about salt's use during the sailing voyages around the time of Columbus. Many accounts of the Revolutionary War and especially the Civil War talk about meat preserved in this way.

The following passage from John Steinbeck's "The Grapes of Wrath" describes the process briefly:

Noah carried the slabs of meat into the kitchen and cut it into small salting blocks, and Ma patted the course salt in, laid it piece by piece in the kegs, careful that no two pieces touched each other. She laid the slabs like bricks, and pounded salt in the spaces.

Today, salting is still used to create salt-cured "country ham" found widely in the southern United States, and dried beef (which you can buy in jars at most grocery stores).

Pickling was widely used to preserve meats, fruits and vegetables in the past, but today is used almost exclusively to produce "pickles," or pickled cucumbers. Pickling uses the preservative qualities of salt combined with the preservative qualities of acid, such as acetic acid (vinegar). Acid environments inhibit bacteria. To make pickles, cucumbers are soaked in a 10-percent salt water brine for several days, then rinsed and stored in vinegar to preserve them for years. Then there are the chemical preservatives. Things like Benzoates (such as sodium benzoate), Nitrites (such as sodium nitrite), antioxidants, and Sulphites (such as sulphur dioxide). If you look at the ingredient labels of different foods, you will frequently see these different types of chemicals used. These chemicals often have more of an effect on color and texture than they do on bacteria activity.

1. Answer the questions

1. What is salting ?
2. What is pickling ?
3. What other preservation techniques do you know ?
4. What do you understand by "environment inhospitable to bacteria"?
5. What chemicals are most frequently used in food preservation ?
6. What vegetables is pickling often used to preserve?

2. Match the expressions with their meanings.

Label	one of the parts of the mixture
Ingredient	piece of paper that gives information about food
Moist	used to flavour or preserve food
Pickle	salt water, vinegar for keeping vegetables in good condition
Salt	simplest and smallest forms of plant life
Preservation	slightly wet
Bacteria	act of preserving

3. Put the verbs into the correct tense form

1. Yesterday I (to meet) a friend of mine whom I (not to see) for a long time.
2. When I (to come) home yesterday, my sister already (to return) and (to sit)at the fireplace looking through old photographs.
3. The sportsmen (to train) since early morning and now they (to go over) the high jump.
4. Five minutes (not to pass) when the train for which we (to wait) (to appear) in the distance.
5. The pupils (to do) a lot of exercises before they (to learn) to write dictations well.

4. Translate into Armenian

preservation technique, Ingredient, inhospitable environment, pickled cucumbers, acetic acid (vinegar), inhibit bacteria, inhospitable environment, preservative qualities of acid, salt water brine, ingredient label, slightly wet, preservative qualities of salt, have more of an effect on color and texture.

5.Translate into English

աղադրում, մարինացում, պահածոյացմանտեխնիկա, խոնավություն, անբարենպաստմիջավայր, աղովնշակված, մարինացվածվարունգ, քացախաթթու, կանխելբակտերիաներիբազմացումը, հակասոկսիդիչ, բաղադրիչմաս,պիտակ

6.Choose the correct verb form

1. When he ---- his studies he began to work.
a. Finished b. finishes c. has finished.
2. The students ---- excitedly when the teacher came in.
a. talked b. are talking c. were talking.
3. She ---- out a few minutes ago.
a. went b. goes c. has gone.
4. I ---- to the cinema yesterday.
a. went b. goes c. have gone.
5. I ---- computer games at 5 o'clock yesterday.
a. played b. was playing c. have played.

7. Summarize the text

Lesson 10

Vocabulary

samples	նմուշ
techniques	կատարման տեխնիկա
microorganisms	մանրէ
consume	ուտել, սպառել
gamma irradiation	զամնաճառագայթ
ultraviolet	ուլտրամանուշակագույն
ultra high pressure	ուլտրաբարձր ճնշում
filtration	ֆիլտրում, քանում
poison	թույն
acidity	թթվայնություն
acetic acid	քացախաթթու
nourishment	կերակրում, սնուցում
nitrates	նիտրատներ
nitrite	նիտրիտներ
sulphites	սուլֆիտ
fungal spoilage	սնկային փչացում
agent	նյութ
food-poisoning	սննդային թունավորում
shelf-life	պիտանելության ժամկետ

Methods of food preservation

Methods of food preservation have been known for thousands of years. Preserved samples of food have even been discovered in ancient Greek times. The techniques of food preservation can be separated into two groups: physical and chemical.

Physical methods of preservation such as canning and freezing rely on killing the microorganisms present, or at least stopping their growth for long enough to allow the food to be safely consumed. Other physical methods include drying, gamma irradiation, ultraviolet or high intensity white light, ultra high pressure and filtration.

Chemical preservatives work either as direct microbial poisons or by reducing the pH to a level of acidity that prevents the growth of microorganisms.

Acetic acid, better known as vinegar, has also been used as a food preservative since ancient times. Salted, pickled or dried foods were about the only nourishment sailors were offered on long sea voyages before the invention of modern refrigeration and preservation techniques.

Chemicals used today

Two commonly used preservative chemicals are:

- nitrates and nitrites that are used to preserve meats such as ham and bacon;
- sulphites that are commonly used to prevent the browning of fruits and vegetables after they've been peeled, and to prevent fungal spoilage.

As important and useful as they are, preservatives have developed a bad name in Western societies such as Australia. Salt is now widely shunned because of its effects on blood pressure. Nitrites and sulphites can both cause asthma, nausea, vomiting and headaches in some people.

For these reasons, consumers have started to demand foods containing lower levels of chemical preservatives. The potential drawback of this is the reduced length of time before conditions favour the rapid multiplication of food-poisoning agents like *Salmonella* and *Listeria*. A number of food-processing techniques have been developed to prolong the shelf-life of foods and permit a reduction in preservative levels.

Natural preservatives

Scientists are putting increased efforts into the discovery and purification of natural compounds for use as safe alternatives to chemical preservatives.

The new breed of protective compounds are small proteins. They are called bacteriocins and are starting to be used in a wide variety of foods. Anyone who has eaten yoghurt has been protected by bacteriocins without knowing it. Bacteriocins are produced by some good bacteria to kill competing organisms such as *Listeria monocytogenes*. The whole bacteria that produces the

bacteriocin, or the purified bacteriocin itself, can be added to foods such as soft cheeses to reduce the risk of pathogen growth. An example of protection using bacteriocins is the use of nisin in crumpets to restrict the growth of *Bacillus cereus*.

Long-life treatments

Modern technology has produced several new processing techniques for prolonging the shelf-life of perishable foods.

UHT

Ultra high temperature treatment (UHT), for example, involves the rapid heating of food to about 140°C. This temperature is maintained for a few seconds to kill bacteria. The product is then cooled rapidly and placed in sterile, airtight containers to prevent recontamination. This treatment is used commonly to produce 'long-life' milk and fruit juices. A disadvantage of the high temperature treatment is that heat-sensitive vitamins such as vitamin C are destroyed. In fruit juices the vitamins are added back after treatment.

Food irradiation

Food irradiation is another sterilizing technique in which foods are bombarded by high-energy rays called gamma rays or by fast-moving electrons to kill bacteria, fungi and insects and, in some cases, to delay fruit ripening. A major benefit of irradiation is that it can occur after food is packaged and sealed.

Although irradiation is effective in killing contaminating microorganisms, it may mask the fact that the food had high levels of spoilage or insect infestation prior to treatment: the microorganisms or insects are killed but their carcasses, faeces or toxins remain.

As with all preservation techniques, irradiation should be used to prolong the life of appropriate food which is of high quality prior to treatment.

1. Answer the questions

1. What two main methods of preservation do you know?
2. What is physical preservation ?
3. What is chemical preservation?
4. Which are the main chemicals used today?
5. What effects do the chemicals have on people's health?
6. What is food irradiation ?

2. Match the expressions with their meanings.

Poison	purify a liquid by using filter
irradiate	send rays of light upon
filtration	invisible rays (in sunlight)
ultraviolet	substance causing death or harm

sample	substance made in or obtained by chemistry
chemicals	specimen (part of a whole)

3. Put the verbs into the correct tense form

1. Where is your luggage ?- I (to leave) it at the station. I (to take) it tomorrow when Nick (to come) to help me.
2. I (to read) about an hour when he (to come).
3. The play (not yet to begin) and people (to talk) in the hall.
4. Yesterday I (to buy) a new pair of gloves, as I (to lose) the old ones.
5. The pupils (to do) a lot of exercises before they (to learn) to write dictations well.

4. Translate into Armenian

Physical methods, food irradiation, fungal spoilage, food-poisoning, shelf-life, to be safely consumed, ultra high pressure, contaminating microorganisms, to prolong the life, purification of natural compounds, fast-moving electrons, modern technology, sterilizing technique, heat-sensitive vitamins, long-life treatments, insect infestation.

5. Translate into English

նմուշ, տեխնիկա, մանրէ, ուտել, սպառել, զամմա ճառագայթ, ուլտրա-մանուշակագույն, ֆիլտրում, քամում, թույն, թթվայնություն, քացախաթթու, կերակրում, սնուցում, ուլտրաբարձր ճնշում, նիտրատներ, սնկային փչացում, սննդային թունավորում, պիտանելության ժամկետ

6. Make the sentences passive.

1. We must postpone the match.
2. The professor is examining the student now.
3. We have already sent the letter.
4. They discuss this problem every day.
5. Ann gave me some money yesterday..
6. They translated this book yesterday.
7. He usually buys his clothes in this shop.

7. Summarize the text

UNIT 2

BREAD TECHNOLOGY



Lesson 1

VOCABULARY

staple	հիմնական սնունդ
dough	խմոր
flour	ալյուր
steam	գոլորշի, գոլորշիացում
leaven	խմորիչ, թթխմոր
yeast	խմորիչ
spice	համեմունք
raisin	չամիչ
walnut	ընկույզ
poppy	կակաչ
seed	սերմ, սերմացու
trace	հետք, քիչ քանակ
texture	կառուցվածք
stiff	կարծր, կոպիտ
stale	չոր, հնացած
prone to	հակված
crumb	փշուր

Bread

Bread is a staple food prepared by cooking a dough of flour and water and possibly more ingredients. Doughs are usually baked, but in some cuisines breads are steamed, fried, or baked on an unoled skillet. It may be leavened or unleavened. Salt, fat and leavening agents such as yeast and baking soda are common ingredients, though bread may contain other ingredients, such as milk, egg, sugar, spice, fruit (such as raisings), vegetables (such as onion), nuts (such as walnuts) or seeds (such as poppy seeds). Bread is one of the oldest prepared

foods, dating back to the Neolithic era. The development of leavened bread can probably also be traced to prehistoric times.

Fresh bread is prized for its taste, aroma, quality and texture. Retaining its freshness is important to keep it appetizing. It is said that bread that has stiffened or dried past is stale. Modern bread is sometimes wrapped in paper or plastic film, or stored in a container such as a breadbox to reduce drying. Bread that is kept in warm, moist environments is prone to the growth of mold. Bread kept at low temperatures, in a refrigerator for example, will develop mold growth more slowly than bread kept at room temperatures, but will turn stale quickly due to retrogradation.

The soft, inner part of bread is known to bakers and other culinary professionals as the crumb, which is not to be confused with small bits of bread that often fall for, called crumbs. The outer hard portion of bread is called the crust.

The word itself, Old English *bread*, is common in various forms to many Germanic languages; such as Frisian bread, Dutch *brood*, German *Brot*, Norwegian and Danish *brød*; it has been claimed to be derived from the root of *brew*. However, it may be connected with the root of *break*, for its early uses are confined to broken pieces, or bits of bread, the Latin “*crustum*” and it was not until the 12th century that it took the place – as the generic name for bread – of *hlaif* ([flaifs] in Gothic: modern English “loaf”), which appears to be the oldest Teutonic name, Old High German “*hleib*” and modern German *Laib*, or Estonian *leib*, and Russian *хлеб* (*khleb*) are similar (all are derived from the Old German word for “loaf”)

1. Answer the questions:

1. What is bread?
2. What are its main ingredients?
3. What texture does the bread have?
4. When was the first bread prepared?
5. Where was the first bread used?
6. How must bread be kept and stored? What’s the best way for keeping and storing bread?
7. What is the difference between two words “crumb” and “crust”?

2. Give Armenian equivalents to the following proverbs and sayings. Make stories to illustrate some of them

1. Too many cooks spoil the broth.

2. You cannot make an omlet without breaking eggs.
3. You cannot eat your cake and have it.
4. The proof of the pudding is in the eating.
5. Better an egg today than a hen tomorrow.
6. Hope is a good breakfast but a bad supper.
7. A watched pot never boils.
8. It's no use crying over spilt milk.

3. a) What nouns can be formed from these adjectives? Use a dictionary to help you.

e.g. kind – kindness

salted, old, fresh, moist, dry, strong, flexible, confident

b) Fill in the blanks with prepositions

1. Bread is a staple food prepared _____ cooking a dough _____ flour, water and more ingredients.
2. The development _____ leavened bread can also be traced to prehistoric times.
3. Fresh bread is prized _____ its taste, aroma, texture.
4. Bread wrapped _____ paper or plastic film.
5. The outer hard portion _____ bread is called the crust.
6. A major advance happened _____ 1961 _____ the development _____ the Chrolewood Process.

4. Read and translate the types of bread:

bagel – a type of bread that is small and round with a hole in the middle

baguette – a long thin loaf of bread made in the French style, soft inside and hard outside

bannock – a flat bread roll made from oats or barley

bap – a large soft bread roll

biscuit – a small round soft bread roll

bread – a common food made from flour, water, and usually yeast; usually sold in a large piece called a loaf or made into smaller pieces called rolls.

brioche – a type of sweet French bread

bun – a small round piece of bread

chapatti – a type of thin flat Indian bread

5. Translate the following text:

Croissant

A rich, buttery roll made of puff pastry that layers yeast dough with butter. Stories of the roll being made in the shape of the crescent of the Turkish flag, after the defeat of the Turks in the Siege of Vienna in the 1683, are a perpetuated myth. Recipes for the croissants do not appear in recipe books until the early 1900s, according to the Oxford Companion To Food, and the earliest French reference is in 1853. The croissant is descendant of the Austrian Kipferl, a crescent roll that was brought to Paris in 1938 or 1939 by August Zang, an Austrian military officer. The kipferl was ultimately interpreted into puff pastry by the French, where it achieved immortality as the croissant.

Croissant is traditionally a breakfast bread served with jam and butter, two variations include the almond croissant topped with sliced almonds, and the chocolate croissant, correctly called pain au chocolat, baked with a piece of dark chocolate in the centre. In the early 1970s, croissants became sandwich substitutes as they evolved from their two traditionally fillings, chocolate and almond paste, into many savory variations, from broccoli to ham and cheese, as well as additional sweet varieties.

6. Give the opposites to the following words and expressions

variable, greater than, known, limited, equal, first term, imaginary, true, definite, finite, increasing

7. Summarize the text

Lesson 2

VOCABULARY

cereal	հացահատիկ
grain	հատիկ
deliberate	քննարկել, խորհրդակցել
spore	խպոր
ubiquitous	ամենուրեք գտնվող, համատարած
harness	լծասարք
expose	ազդեցության ենթարկել, ցուցադրել
skim	քաշել (քափը, սերուցքը)
sour	թթու
foam	փրփուր
wheat bran	ցորենի թեփ

History of Bread

Bread is one of the oldest prepared foods, dating back to the Neolithic era. The first bread produced was probably cooked versions of a grain-paste, made from ground cereal grains and water, and may have been developed by accidental cooking of deliberate experimentation with water and grain flour. Yeast spores are ubiquitous, including the surface of cereal grains, so any dough left to rest will become naturally leavened. There were multiple sources of leavening available for early bread. Airborne yeasts could be harnessed by leaving uncooked dough exposed to air for some time before cooking. Pliny the Elder reported that the Gauls and Iberians used the foam skimmed from beer to produce “a lighter kind of bread than other peoples”. Parts of the ancient world that drank wine instead of beer used a paste composed of grape juice and flour that was allowed to begin fermenting, or wheat bran steeped in wine, as a source for yeast. The most common source of leavening, however, was to retain a piece of dough from the previous day to use as a form of sourdough starter.

A major advance happened in 1961 with the development of the Chorleywood Bread Process, which used the intense mechanical working of dough to dramatically reduce the fermentation period and the time taken to

produce a loaf. The process, whose high-energy mixing allows for the use of inferior grain, is now widely used around the world in large factories.

Recently, domestic breadmakers that automate the process of making bread have become popular in the home.

1. Answer the questions:

1. What is bread? What era does it date back?
2. What was the first bread made of?
3. What leavening was available for early bread?
4. What was the most common source of leavening?
5. When did a major advance happen?
6. What did the major advance use?
7. Who has become popular in the home-country?

2. Give Armenian equivalents:

cereal, grain, deliberate, spore, ubiquitous, hardness, skim, sour, foam, ground cereal, flour, yeast spores, naturally leavened, multiple, wine, beer, grape juice, wheat bran, loaf, breadmaker, popular

3. Fill in the blanks with prepositions *in, from, of, in, for, with, to upon, at, by, in, into*:

About that loaf of bread

Leavened bread has been around a long while – since the days of ancient Egypt, Babylon, and Greece, _____ fact. Then, as now, it was made _____ wheat, or _____ a mixture _____ wheat and rye. The elastic gluten _____ wheat is essential _____ for bread to rise.

But a lot has changed – today’s bread is mass-produced. Our bread also contains more ingredients and additives, which causes special problems _____ the baker, miller, and farmer. Even the same classes _____ wheat can vary significantly _____ baking qualities. And when these differences are great enough, they can cause a lot _____ trouble _____ a bread factory.

Today a chemist can analyze a type _____ gluten protein and determine its baking properties. This can help wheat breeders get an early indication _____ the kind _____ flour their most promising plants will produce. It provides us _____ an incredible amount _____ information and it gives it _____ us in a day instead _____ months or years.

4. Complete the following sentences

1. Bread is a staple food prepared by ...
2. Fresh bread is prized for its ...
3. Modern bread is sometimes wrapped in ...
4. The first bread was cooked ...
5. Bread made from ...
6. Domestic bread makers that automate the process of making bread have become ...

5. Translate the following text:

Rice

Rice is the seed of the monocot plants. As a cereal grain, it is the most widely consumed food for a large part of the world's human population, especially in Asia. It is the grain with the third-highest worldwide production after sugarcane and maize. Since a large portion of maize crops are grown for purposes other than human consumption, rice is the most important grain with regard to human nutrition and caloric intake, providing more than one fifth of the calories consumed worldwide by humans. Chinese legends attribute the domestication of rice to Shennong, the legendary Emperor of China and inventor of Chinese agriculture. Genetic evidence has shown that rice originates from a single domestication 8,200-13,500 years ago in the Pearl River valley region of China. From East Asia, rice was spread to Southeast and South Asia. Rice was introduced to Europe through Western Asia, and to the Americas through European colonization.

Rice is normally grown as an annual plant. The rice plant can grow to 1-1.8m tall, occasionally more depending on the variety and soil fertility. It has long, slender leaves 50-100cm long and 2-2.5cm broad. The small flowers are wind-pollinated. Rice can be grown practically anywhere, even on a steep hill or mountain area with the use of water controlling terrace systems. The traditional method for cultivating rice is flooding the fields while, or after setting the young seedlings.

6. Read and translate the types of bread:

chapatti – a type of thin flat Indian bread

ciabatta – a type of flat Italian bread made with olive oil

croissant – a type of light bread with a curved shape that is usually eaten for breakfast

French bread – bread in the form of a long thin stick that is soft on the inside and hard on the outside.

loaf – bread in a long, round, or square shape that you cut into slices for eating. A sliced loaf has been cut into slices before it is sold.

matzo – a type of flat bread traditionally eaten by Jewish people during the Passover holiday

muffin – a flat round type of bread, usually cut in half and eaten hot with butter.

pitta bread – a type of flat bread that is eaten especially with Middle Eastern food.

roll – bread in the form of a small round or long shape

tortilla – a type of thin flat Mexican bread that is often rolled or folded and filled with cheese, beans, or meat

VII. Summarize the text.

Lesson 3

VOCABULARY

significant	նշանակալի, կարևոր
measure	միջոց
affect	ներգործել, ազդել
texture	կառուցվածք
crumb	փշուր, փշրանք (հացի)
percentage	տոկոս, տոկոսային հարաբերություն
artisan	արհեստավոր
bubble	պղպջակ, փուչիկ
coarse	կոշտ, կոպիտ
retard	ուշացնել, դանդաղեցնել
flour	ալյուր
rye	տարեկան, աշորա
barley	գարի
protein	պրոտեին
powder	փոշի
maize	եգիպտացորեն
starch	օսլա
glut	գերհագեցում, անչափավորություն (սննդի)
oxidize	օքսիդացնել, օքսիդանալ
albumen	(ծվի) սպիտակուց, սպիտակուցային նյութ
globule	արյան կարմիր գնդիկ
glide	սահել, սահուն կերպով սահել
dissolve	լուծ(վ)ել, քայքայ(վ)ել
knead	հունցել (խմորը), տրորել
liquid	հեղուկ
paste	խմոր, մածուկ
chew	ծամել

Quick Bread

Quick breads usually refer to breads chemically leavened, usually with both baking powder and baking soda, and a balance of acidic ingredients, and alkaline ingredients. Examples include: pancakes and waffles, muffins and carrot cake, Boston brown bread and zucchini, and banana bread.

The amount of flour is the most significant measurements in a bread recipe, as it affects texture and crumb the most. Professional bakers use a system of percentages known as Bakers' Percentage in their recipe formulations, and measure ingredients by weight instead of by volume. Measurement by weight is much more accurate and consistent than measurement by volume, especially for the dry ingredients.

Flour is always stated as 100%, and the rest of the ingredients are a percent of that amount by weight. Common table bread in the U.S. uses approximately 50% water, resulting in finely-textured, light bread. Most artisan bread formulas contain anywhere from 60 to 75% water. In yeast breads, the higher water percentages result in more CO₂ bubbles, and a coarser bread crumb. One pound (≈450g) of flour will yield a standard loaf of bread, or two French loaves.

Calcium propionate is commonly added by commercial bakeries to retard the growth of molds.

Flour is product made from grain that has been ground into a powdery consistency. It is flour that provides the primary structure to the final baked bread. Commonly available flours are made from rye, barley, maize, and other grains, but it is wheat flour that is most commonly used for breads. Each of these grains provides the starch and protein necessary for the production of bread.

The quantity of the proteins contained in the flour serves as the best indicator of the quality of the bread dough and the finished bread. While bread can be made from all-purpose wheat flour, for quality bread specialty bread flour, containing more protein is recommended. If one uses flour with a lower (9-11%) protein content to produce bread, a longer missing time will be required to develop gluten strength properly. This extended mixing time leads to oxidization of the dough, which gives the finished product a whiter crumb, instead of the cream colour preferred by most artisan bakers.

Wheat flour in addition to its starch contains three water-soluble protein groups, albumin, globulin, proteoses, and two non-water soluble protein groups, glurenin and gliadin. When flour mixed with water the water-soluble proteins dissolve, leaving the glutenin and gliadin to form the structure of the resulting dough. When worked by kneading, the glutenin forms strands of long thin chainlike molecules while the shorter gliadin forms bridges between the stands of glutenin. The resulting networks of strands produced by these two proteins are

known as gluten. Gluten development improves if the dough is allowed to autolyse.

Water, or some other liquid, is used to form the flour into a paste or dough. The volume of liquid required varies between recipes, but a ratio of 1 part liquid to 3 parts flour is common for yeast breads, while recipes that use steam as the primary leavening method may have a liquid content in excess of one part liquid to one part flour by volume. In addition to water, other types of liquids that may be used include dairy products, fruit juices, or beer. In addition to the water in each of these, they also contribute additional sweeteners, fats, and/or leavening components.

1. Answer the questions:

1. What kind of bread does the quick bread usually refer to?
2. What is the most significant measurement in a bread recipe?
3. What do we use to form the paste or dough?
4. What is flour? What does it provide?
5. How is the flan made?
6. What do commercial bakeries add to retard the growth of molds?
7. What is water used for?

2. Give the opposites to the following words and expressions:

quick, include, known, light, growth, add, make, for, necessary, finish, give, short, low

3. Find all the verbs in the text and give their basic forms.

One evening several tourists who were staying at a hotel in Manchester (to have dinner) in the hotel restaurant. Fish (to be brought) and while they (to eat) it, some of them told interesting stories about finding rings and other things inside fish. An old man who had only listened to their stories and never spoken a word, suddenly (to say) that he would like to tell them an interesting story, too. And this is what he (tell) them:

“When I was a young man, I (live) in New York and (to be going to) marry a beautiful young girl whose name (to be) Alice. About two months before our marriage I (to be sent) to England for a fortnight. I (to go) to say goodbye to Alice and (to give) her a ring. She (to give) hers and (to say) that she would be waiting for me”

But I (to have) to stay in England six months, and not a fortnight as I had planned. Later in September my work (to be done) at last and I (to be able to) leave for New York.

Next morning when I (to be) already aboard the steamer, I (to look) through the morning newspaper, and what do you think I (to see)? Alice (to be going to) marry another man! I couldn't believe my eyes, but it (to be) true, I (to be) so angry that I (to throw) her ring into the sea.

I (to have dinner) at a restaurant in New York a few days later, and while I (to eat) the fish, I (to bite) on something hard. What do you think it was?"

"The ring!" all the listeners (to cry) out at once.

"No", (to say) the old man sadly, "it (to be) a fish-bone"

4. Make up 10 sentences using the words and expressions from the text.

5. Give adverbs corresponding to the following adjectives:

Quick, significant, professional, light fine, commercial, common, necessary, additional

6. Choose the correct word from the given in the brackets to complete the sentences:

1. Professional bakers (use, using) a system of percentages known as bakers, percentage in their recipe formulations.
2. Flour is a product (have made, made) from grain.
3. Each of these grains (had provided, provides) the starch and protein necessary for the production of bread.
4. The resulting networks of stands (producing, produced) by these two proteins are known as gluten.
5. Water, or some liquid, (is used, are used) to form the flour into a paste or dough.

7. Summarize the text.

Lesson 4

VOCABULARY

leaven	թթխմոր
rite	ծես, արարողություն, ծիսակարգ
derive	ծագել, սկիզբ առնել
muffin	կլոր՝ տաք բուլկի
tin	թիթեղե աման
pattern	մոնուշ, օրինակ
straight	ուղիղ, պարզ
scarce	սակավ, քիչ քանակով
propagate	բազմացնել, աճեցնել, տարած(վ)ել
herb	խոտ, դեղաբույս
to punch	բռունցքով խփել
(a) batch (of loaves)	մի փուռ հաց, կապոց

Leavening

Leavening is the process of adding gas to a dough before or during baking to produce a lighter, more easily chewed bread. Most bread consumed in the West is leavened. However, unleavened breads have symbolic importance in Judaism and Christianity. Jews consume unleavened bread called matzo during Passover. They are also used in the Roman Catholic Christian liturgy when they celebrate the Eucharist, a rite derived from the narrative of the Last Supper when Jesus broke bread with his disciples, perhaps during a Passover Seder. On the other hand, the Orthodox Church always uses leavened bread.

Chemical leavening – A simple technique for leavening bread is the use of gas-producing chemicals. There are two common methods. The first is to use baking powder or a self-rising flour that includes baking powder. The second is to have an acidic ingredient such as buttermilk and add baking soda. The reaction of the acid with the soda produces gas.

Chemically-leavened breads are called *quick breads* and *soda breads*. This technique is commonly used to make muffins, pancakes, American-style biscuits, and sweet breads such as banana bread.

Yeast leavening – Many breads are leavened by yeast. The yeast used for leavening bread is *Saccharomyces cerevisiae*, the same species used for brewing alcoholic beverages. This yeast ferments carbohydrates in the flour, including any sugar, producing carbon dioxide. Many bakers leaven their dough with commercially produced baker's yeast. Baker's yeast has the advantage of producing uniform, quick, and reliable results, because it is obtained from a pure culture. Many artisan bakers produce their own yeast by preparing a "growth culture", which they then use in the making of bread. This culture kept in the right conditions will continue to grow and provide leavening for many years.

Both the baker's yeast and the sourdough method of baking bread follow the same pattern. Water is mixed with flour, salt and the leavening agent (baker's yeast or sourdough starter). Other additions (spices, herbs, fats, seeds, fruit, etc.) are not necessary to bake bread, but are often used. The mixed dough is then allowed to rise one or more times (a longer rising time results in more flavor, so bakers often punch down the dough and let it rise again), then loaves are formed, and (after an optional final rising time) the bread is baked in an oven.

Many breads are made from straight dough, which means that all of the ingredients are combined in one step, and the dough is baked after the rising time. Alternatively, dough can be made using a pre-ferment, when some of the flour, water, and the leavening are combined a day or so ahead of baking, and allowed to ferment overnight. On the day of the baking, the rest of the ingredients are added, and the rest of the process is the same as that for straight dough. This produces more flavourful bread with better texture. Many bakers see the starter method as a compromise between the highly reliable results of baker's yeast, and the flavour/complexity of a longer fermentation. It also allows the baker to use only a minimal amount of baker's yeast, which was scarce and expensive when it first became available. Most yeasted pre-ferments fall into one of three categories: *polish* or *pouliche*, a loose-textured mixture composed of roughly equal amounts of flour and water (by weight); *biga*, a stiff mixture with a higher proportion of flour; and *pâte fermentée*, which is simply a portion of dough reserved from a previous batch. Sourdough also known as "natural leaven" takes it a step further, creating a ferment with flour and water that propagates naturally occurring yeast and bacteria (usually *Saccharomyces exiguus*, which is more acid-tolerant than *Saccharomyces cerevisiae*, and various species of *Lactobacillus*).

1. Answer the questions:

1. What does “leavening the bread” mean? What kind of process is it?
2. Which bread is consumed in the West
3. Which two methods are used for leaving the bread? Which method would you prefer?
4. How is the bread leavened?
5. How do most bakers in the USA leaven the bread?
6. What is the bread made from?
7. What does “sour dough” mean?

2. Fill in the gaps using the following prepositions *in, by* or *on*:

1. Most bread consumed ____ the West is leaven.
2. ____ the other hand, the Orthodox church always uses leavened bread.
3. This culture kept ____ the right conditions will continue to grow and provide leaving for many years.
4. ____ the day of the baking the rest of the ingredients are added, and the rest of the process is the same.
5. Many kinds of bread are leavened ____ yeast.
6. They are also used ____ the Roman Catholic Christian Liturgy.

3. Give the antonyms of the following words:

before, light, easy, always, pure, make, keep, continue, grow, salted, rise, expensive

4. Make up 5 groups of three words associated in the meaning of area of usage:

table-lamp	smell	sofa	envelope	cigarette
stamp	bake	cigar	touch	chair
living room	letter	taste	bathroom	pipe

5. What are the comparative and superlative forms of the following adjectives?

- | | | | |
|--------|---------|--------|-------------|
| a) old | b) easy | c) far | d) boring |
| rich | dirty | good | important |
| cheap | noisy | bad | comfortable |
| light | | little | |

VI. Make up 10 sentences of your own in Passive Voice using words and expressions from the previous texts.

VII. Summarize the text.

Lesson 5

VOCABULARY

lactic	կաթնային
symbiosis	համակեցուկություն
excrete	արտադրել, արտաթորել
acid	թթու
strain	լարվածություն, ձգում
reliable	վստահելի
embarrass	դժվարացնել, շփոթեցնել
bake from scratch	թխել օգտագործելով հումքը
revere	հարգել, մեծարել
flex	էլեկտրական լար

Sourdough loaves

The sour taste of sourdoughs actually comes not from the yeast, but from a lactobacillus, with which the yeast lives in symbiosis. The lactobacillus feeds on the byproducts of the yeast fermentation, and in turn makes the culture go sour by excreting lactic acid, which protects it from spoiling (since most microbes are unable to survive in an acid environment). All yeast-leavened breads used to be sourdoughs, and the leavening process was not understood until the 19th century, when with the advance of microscopes, scientists were able to discover the microbes that make the dough rise. Since then, strains of yeast have been selected and cultured mainly for reliability and quickness of fermentation. Billions of cells of these strains are then packaged and marketed as “Baker’s Yeast”. Bread made with baker’s yeast is not sour because of the absence of the lactobacillus. Bakers around the world quickly embraced baker’s yeast for it made baking simple and so allowed for more flexibility in the bakery’s operations. It made baking quick as well, allowing bakeries to make

fresh bread from scratch as often as three times a day. While European bakeries kept producing sourdough breads, in the U.S., sourdough baking was widely replaced by baker's yeast, and only recently has that country (or parts of it, at least) seen the rebirth of sourdough in artisan bakeries. Each region of the world has different strains of lactobacillus, hence the flavour of the bread made from home starters is unique. The San Francisco Bay Area is especially famous for its sourdough bread.

Sourdough breads are most often made with a sourdough starter. A sourdough starter is a culture of yeast and lactobacillus. It is essentially a dough-like or pancake-like flour/water mixture in which the yeast and lactobacilli live. A starter can be maintained indefinitely by periodically discarding a part of it and refreshing it by adding fresh flour and water. (When refrigerated, a starter can go weeks without needing to be fed). There are starters owned by bakeries and families that are several human generations old, much revered for creating a special taste or texture. Starters can be obtained by taking a piece of another starter and growing it, or they can be made from scratch. There are hobbyist groups on the web who will send their starter for stamped, self addressed envelope, and there are even mailorder companies that sell different starters from all over the world. An acquired starter has the advantage of being more proven and established (stable and reliable, resisting spoiling and behaving predictably) than from-scratch starters.

There are other ways of sourdough baking and culture maintenance. A more traditional one is the process that was followed by peasant families throughout Europe in past centuries. The family (usually the woman was in charge of bread-making) would bake on a fixed schedule, perhaps once a week. The starter was saved from the previous week's dough. The starter was saved from the previous week's dough. The starter was mixed with the new ingredients, the dough was left to rise, then a piece of it was saved (to be the starter for next week's bread). The rest was formed into loaves which were marked with the family sign communal oven to bake. These communal ovens over time evolved into what are known today as bakeries, when certain people specialized in bread baking, and with time enhanced the process so far as to be able to mass produce cheap bread for everyone in the world.

1. Answer the questions:

1. What does the sour taste come from?
2. What makes the dough rise?
3. What is the San Francisco Bay area famous for?

4. What does “sourdough starter” mean?
5. How can a starter be maintained?
6. What other ways of sourdough baking do you know?
7. How did women from peasant families traditionally bake bread in past century?

2. Fill in the gaps with relative pronouns *which, that, who, whom*:

1. The sour taste of sourdoughs actually comes not from the yeast, but from a lactobacillus, with ____ the yeast lives in symbiosis.
2. It is essentially a dough-like or pancake-like flour/water mixture in ____ the yeast and lactobacillus live.
3. There are hobbyist groups on the web ____ will send their starter for a stamped, self-addressed envelope.
4. There are even mail-order companies ____ sell different starters from all over the world.
5. The lactobacillus feeds on the byproducts of the yeast fermentation, and in turn makes the culture go sour by excreting lactic acid, ____ protect it from spoiling.
6. A more traditional one is the process ____ was followed by peasant families throughout Europe in past centuries.
7. The rest was formed into loaves ____ were marked with the family sign, and taken to the communal oven to bake.

3. Match the words in *A* with their synonyms in *B*:

<i>A</i>	<i>B</i>
taste	afford
protect	accumulate
advance	defend
select	honoured
allow	flavour
keep	assist

famous	choose
create	compare
advantage	public
communal	benefit

4. Think of your own examples to complete the given sentences:

1. It is natural that ...
2. It is strange that ...
3. It is impossible that ...
4. It is really is unbelievable that ...
5. Isn't it strange that ... ?
6. It is very important ...

5. Open the brackets using the verb in the correct tense:

1. The sour taste of sourdoughs actually _____ (to come) not from the yeast, but from a lactobacillus.
2. Since then strains of yeast _____ (to be) selected and cultured mainly for reliability and quickness of fermentation.
3. Starters can be obtained by _____ (to take) a piece for another starter and growing it, or they can be made from scratch.
4. A more traditional one is the process that _____ (to be followed) by peasant families throughout Europe in past centuries.
5. The starter _____ (to be mixed) with the new ingredients, the dough _____ (to be left) to rise, then a piece of it _____ (to be saved) many years ago.

6. Put the verbs in brackets into the proper tense form:

Sweetness

Sweetness (to be) one of the five basic tastes and (to be) almost universally regarded as a pleasurable experience. Foods rich in simple carbohydrates such as sugar (to be) those most commonly associated with sweetness, although there (to be) other natural and artificial compounds that (to be) sweet at much lower concentrations, allowing their use as non-caloric sugar substitutes. Other compounds may alter perception of sweetness itself.

The chemosensory basis for detecting sweetness, which (to vary) among both individuals and species, (to have) only been teased apart in recent years. A recent theoretical model of sweetness (to be) the multipoint attachment theory, which (to involve) multiple binding sites between a sweetness receptor and a sweet substance.

Studies (to indicate) that responsiveness to sugars and sweetness (to have) very ancient evolutionary beginnings, being manifest as chemotaxis. Newborn human infants also (to demonstrate) preferences for high sugar concentrations and (to prefer) solutions that (to be) sweeter than lactose, the sugar found in breast milk. Sweetness (to appear) to have the highest taste recognition threshold, being detectable at around 1 part in 200 of sucrose in solution. By comparison, bitterness (to appear) to have the lowest detection threshold, at about 1 part in 2 million for quinine in solution. In the natural settings that human primate ancestors evolved in, sweetness intensity should indicate energy density, while bitterness tends to indicate toxicity. The high sweetness detection threshold and low bitterness detection threshold would have predisposed our primate ancestors to seek out sweet-tasting (and energy-dense) foods and avoid bitter-tasting foods. Even amongst leaf-eating primates, there (to be) a tendency to prefer immature leaves, which tend to be higher in protein and lower in fibre and poisons than mature leaves. The 'sweet tooth' thus has an ancient evolutionary heritage, and while food processing has changed consumption patterns, human physiology remains largely unchanged.

7. Summarize the text.

Lesson 6

VOCABULARY

rapid	արագ, արագընթաց
expansion	ընդարձակում, տարածում, ընդլայնում
unpredictable	անկանխատեսելի
regardless	ուշադրություն չդարձնող, հաշվի չառնող
bubble	պղպջակ, բշտիկ, պուչիկ
generate	ծնունդ տալ, առաջացնել, արտադրել
acrate	գազավորել, գազով հագեցնել
carbon dioxide	ածխաթթու գազ
tearoom	թեյարան
shorten	կրճատ(վ)ել, կարճացնել, կարճանալ
lard	խոզաճարպ (հալած)
glut	գերհագեցում, առատություն, անչափավորություն
coating	շերտ
lubricant	քսուք, քսանյութ,
ammonia	ամոնիակ
amyloid	ամիլոիդ
enhance	մեծացնել, բարձրացնել, ուժեղացնել
restrict	սահմանափակել
dip-dipped-dipt	թաթախել, քաշել, քաշել (ջուրը)
savory	համեղ, համով, կծու՝ ախորժակ բացող
condiment	համեմունք
steam	գոլորշի
crust	հացի չորուկ, կեղև
allure	հրապուրել, գրավել (խորամանկությամբ), գերել

Steam Leavening. The serving of bread.

The rapid expansion of steam produced during baking leavens the bread, which is as simple as it is unpredictable. The best know steam-leavened bread is the popover. Steam-leavening is unpredictable since the steam is not produced until the bread is baked.

Steam-leavening happens regardless of the rising agents (baking soda, yeast, baking powder, sour dough, beaten egg whites, etc.)

- The leavening agent either contains air bubbles or generates carbon dioxide.
- The heat vaporizes the water from the inner surface of the inner surface of the bubbles within the dough.
- The steam expands and makes the bread rise.

It is actually the main factor in the rise of bread once it has been put in the oven. CO₂ generation, on its own, is too small to account for the rise. Heat kills bacteria or yeast at an early stage, so the CO₂ generation is stopped.

Bacterial leavening – Salt rising bread employs a form of bacterial leavening that does not require yeast. Although the leavening action is not always consistent, and requires close attention to the incubating conditions, this bread is making a comeback due to its unique cheese-like flavour and fine texture.

Aeration – Aerated bread is leavened by carbon dioxide being forced into dough under pressure. The technique is no longer in common use, but from mid 19th to 20th centuries bread made in this way was somewhat popular in the United Kingdom, made by the Aerated Bread Company and sold in its high-street tearooms.

Fats or shortenings – Fats such as butter, vegetable oils, lard, or that contained in eggs affects the development of gluten in breads by coating and lubricating the individual strands of protein and also helping hold the structure together. If too much fat is included in a bread dough, the lubrication effect will cause the protein structures to divide. A fat content of approximately 3%by weight is the concentration that will produce the greatest leavening action. In addition to their effects on leavening, fats also serve to tenderize the breads they are used in and also help to keep the bread fresh longer after baking.

Bread improvers – Bread improvers are frequently used in production of commercial breads to reduce the time that the bread takes to rise, and to improve the texture and volume of bread. Chemical substances commonly used as bread improvers include ascorbic acid, hydrochloride, sodium metabisulfate, ammonium chloride, various phosphates, amylase, and protease.

Sodium/salt is one of the most common additives used in production. In addition to enhancing flavour and restricting yeast activity, salt affects the crumb and the overall texture by stabilizing and strengthening the gluten. Some artisan bakers are foregoing early addition of salt to the dough, and are waiting until after a 20 minute “rest”. This is known as an autolyse, and is done with both refined and with whole grain flours.

Bread can be served at any temperature. Once baked, it can subsequently be toasted. It is most commonly eaten with the hands, or sometimes with a knife and fork. It can be eaten by itself or as a carrier for another, usually less compact food. Bread may be dipped into a liquid (such as gravy, olive oil, or sardine pâté), topped with various spreads, both sweet and savoury, or serve as the enclosure for the ubiquitous sandwich with any number of varieties of meat, cheese, vegetables or condiments inside.

The bread crust is formed from exposed dough during the cooking process. It is hardened and browned through the Maillard Reaction using the sugar and amino acids and the intense heat at the bread surface. The nature of a bread crust differs depending on the type of bread and the way it is baked. Commercial bread is baked using jets that direct steam towards the bread to help produce a desirable crust. Bread crusts are sometimes considered unpalatable, especially and notoriously by young children, who commonly remove and throw away the crusts. Some manufacturers have begun to market special crust-less breads. But for many, crusts are part of the allure of a delicious loaf of bread.

1. Answer the following questions:

1. What is the main factor for rising the bread?
2. What are the rising agents for baking the bread?
3. Which bread was popular in the United Kingdom from the mid 19th to 20th centuries? Where was it sold?
4. What role does fat play in bread?
5. What improves the texture of bread?
6. How can bread be served?
7. How and when is bread crust formed?

2. Write down all the countable and uncountable nouns from the text. Make up 5 sentences.

3. Fill in the gaps with *some, any, much, many, a lot of, few, a little*:

1. Put _____ marmalade in Christmas pudding, but _____ I don't like sweet puddings.
2. Take _____ apples. Two or three. Have you taken _____ sugar in your pie? Just _____. Only one spoonful.
3. Have you got _____ oranges? Yes, three kilograms.
4. This dish will be ready in _____.
5. We need _____ eggs to put a wedding cake. Two dozens.
6. Have you got _____ food in the fridge? – I don't need _____, I often go out for a meal.

4. Find Armenian equivalents of the given sayings and express your opinion concerning it.

1. Eat at pleasure, drink with measure.
2. Tastes differ.
3. To live from hand to mouth.
4. After dinner sit (sleep) a while, after supper walk a mile.

5. Fill in the gaps with prepositions where it is necessary.

1. The rapid expansion _____ produced during baking leavens the bread.
2. Steam leaving is unpredictable _____ the steam is not produced _____ the bread is baked.
3. It is actually the main factor _____ the rise _____ bread once it has been put _____ the oven.
4. Heat kills bacteria or yeast _____ an early stage.
5. Salt rising bread employs a form _____ bacterial leavening that does not require yeast.
6. Aerated bread is leavened _____ carbon dioxide being forced _____ dough _____ pressure.
7. The technique is no longer in common use, but _____ the mid 19th _____ 20th centuries bread made this way was somewhat popular _____ the UK, made _____ the Aerated Bread Company and sold in its high street tearooms.

6. a) Form nouns using the following verbs:

assign, confine, employ, represent, vary, increase, correspond, restrict

b) Form adverbs using the following adjectives:

usually, approximately, continuously, evidently

c) translate the following words and their derivatives:

vary – variable – variation – variant – various

continue – continuous – continued – continuity – continuously

approximate – approximation – approximately

produce – production – productive – producer

predict – prediction – predictable – predictor

7. Summarize the text.

Lesson 7

VOCABULARY

Armenian cuisine	հայական խոհանոց
prominent	աչքի ընկնող, նշանավոր, հայտնի
istinctiveness	հատկանշականություն, տարբերիչ գիծ
sacramental meaning	նվիրական, սուրբ նշանակություն
versatility	բազմակողմանիություն, փոփոխականություն
crisp	փխրուն
brittle	փխրուն,
sesame	քնջութ
poppy	կակաչ, պուտ
limber	ճկուն
ancestor	նախահայր
brittle	փխրուն, դյուրաբեկ
eucharist	Սուրբ Հաղորդություն
staple	հիմնական արտադրանք, տվյալ վայրում արտադրվող

BREAD ACROSS DIFFERENT CULTURES

Armenian Lavash

Armenian cuisine is one of the ancient cuisine in Asia and the oldest in South Caucasus region.

The prominent features of Armenian cuisine were founded at least a thousand year before Christianity and have been kept nearly unchanged over the next three thousand years. The type of oven (touner) had a great influence on distinctiveness of the culinary technique, diet, and particularly on uniqueness of the Armenian flat bread called Lavash.

Throughout the ages Lavash has not only occupied the highest place in Armenian cuisine but also acquired the sacramental meaning, symbolizing life and wisdom. Unlike most other types of bread, Armenian Lavash doesn't contain

a yeast or traditional bread starter which makes Lavash healthier and suitable for almost any diet. Armenian lavash is a very thin bread that can be kept well in a dry place.

Another prominent feature of lavash is versatility, which allows it to be used as a spoon, a plate, a saucepan or a napkin. Ranging from soft and limber to crisp, cracker-type lavash can be made into rounds or ovals.

Crisp lavash can be sprinkled with water half an hour before serving, wrapped in a kitchen towel, set aside to absorb the water until it softens. In some villages, Armenians bake lavash in autumn to be stored for use throughout the winter. For this purpose, lavash is dried, stacked in a pile and stored in a dry place and then softened before serving.

Soft lavash is astoundingly multi-function type of bread easily adaptable for making wraps and sandwiches as well as for scooping up food. It goes particularly well with different kind of appetizers, offering a massive opportunity for culinary creativity.

As many other flat breads, lavash is of an ancient origin and has not changed much over several thousand years. That is why today we can enjoy the taste and quality of the bread discovered by our ancestors.

Lavash is a soft thin flat bread popular not only in Armenia, but in Iran, Iraq and the Caucasus. Traditionally the dough is rolled out flat and slapped against the hot walls of a clay oven. While quite flexible when fresh, lavash dries out quickly and becomes brittle and hard. The soft form is easier to use when making wrap sandwiches; however, the dry form can be used for long-term storage (almost one year) and is used instead of leavened bread in Eucharist traditions by the Armenian Apostolic Church. In villages in Armenia, the dried lavash is stacked high in layers to be used later, and when the time comes to rehydrate the bread, it is sprinkled with water to make it softer again. In its dry form, left-over lavash is used in Iran to make quick meals after being rehydrated with water, butter and cheese. In Armenia the dried bread is broken up into “khash”. Fresh lavash is also used with kebabs to make durum wraps or in Armenia to make “*burum*” which are wraps with herbs and cheese. According to the Encyclopedia International, "Common to all Armenians is their traditional unleavened bread, lavash, which is a staple in the Armenian diet."

Lavash is made with flour, water, and salt. The thickness of the bread varies and depends on how thin it's rolled out. Toasted sesame seeds and/or poppy seeds can be sprinkled on before baking.

It is the most widespread type of bread in Armenia, Iran and the Caucasus.

It is also known in English as **lahvash** or **cracker bread**.

1. Answer the following questions:

1. What do you know about Armenian cuisine? What is lavash?
2. What can you tell about Armenian flat bread lavash? Do you like it?
3. Where must lavash be kept?
4. How is lavash made?
5. What products are made from grain?
6. How can lavash be used?
7. What makes lavash healthier and suitable for almost any diet?
8. What purpose is the soft form of lavash used for?
9. What does “burum” mean?
10. What other countries is lavash used in?

2. Match the words in A with their synonyms in B:

<i>A</i>	<i>B</i>
ancient	discover
find	several
some	old
to found	Aim
to allow	to establish
purpose	permit
soft	different
various	elastic

3. Fill in the gaps using the correct form of the verb given in brackets:

1. The prominent features of Armenian cuisine _____ (to be) founded at least a thousand years before Christianity and have been _____ (keep) nearly unchanged over the next three thousand years.
2. Armenian lavash _____ (do not contain) a yeast or traditional bread starter which _____ (to make) lavash healthier and suitable for almost any diet..
3. Armenian cuisine _____ (to be) one of ancient cuisine in Asia and, the oldest in South Caucasus region.
4. Crisp lavash can _____ (to be sprinkled) with water half an hour before serving, _____ (to wrap) in a kitchen towel, set aside to absorb the water until it _____ (to soften).
5. We _____ (to need) eggs to put a wedding cake. Two dozens.

6. Have you _____ (to get) food in the fridge? – I _____ (not to need) a fridge, I often go out for a meal.

4. Give Russian equivalents to the following proverbs and sayings. Make stories to illustrate some of them.

1. Too many cooks spoil the broth.
2. You cannot eat your cake and have it.
3. Better an egg today than a hen tomorrow.
4. Hope is a good breakfast, but a bad supper.
5. First come, first served.

5. Complete the following sentences:

1. Armenian lavash is a very thin _____ that can be kept well in a _____.
2. Crisp lavash can be sprinkled _____ _____ half an hour before serving.
3. Today we can _____ the taste and quality of the bread.
4. Fresh lavash is also _____ _____ kebabs.
5. Lavash is made with _____, _____, and _____.

6. a) Are the following statements true (T) or false (F):

1. Armenian cuisine is one of the newest cuisine in Asia and in South Caucasus region.
2. Armenian lavash is a very thick bread that can be kept well in a very wet place.
3. Crisp lavash can be sprinkled with water half an hour after serving.
4. The thickness of the bread varies and depends on how thin it is rolled out.
5. Lavash is the most widespread type of bread in Spain, the USA, and Russia.

7. Summarize the text.

Lesson 8

VOCABULARY

to splash	շաղ տալ, կաթիլներով շաղ տալ
sesame seeds	քնջութի սերմ
glazed	շաքարահյութով պատել, շաքարել
delicious	հիանալի, համեղ, ընտիր
ingredient	ինգրեդիենտ, բաղադրամաս

BREAD ACROSS DIFFERENT CULTURES

Samarkand Bread

There is no tastier bread than Samarkand one. Real Samarkand bread should be eatable within three years. It is enough to splash water on it and heat in the tandyr (clay oven used to bake bread). Everyone, who has ever visited Samarkand, does not leave it without Samarkand bread. It is various: small with sesame seeds, large glazed bread and always incomparably delicious, so there is nothing surprising in the fact, that people said legends about it.

Once Khan of Bukhara asked his advisers, why the bread is taken from Samarkand to Bukhara, if they could bake it in Bukhara. He was told that bread would be tasty if it was baked only in Samarkand, but the khan did not believe the advisers and ordered to bring Samarkand bakers to Bukhara. The order was carried out. Khan sent people to Samarkand to find the best baker in the city and ordered him to bake bread in Bukhara. But the bread turned out different than it was expected. Advisers decided that the case was in the ingredients and brought from Samarkand a tandyr oven, flour, water, but even then the bread differed from Samarkand one. Then the baker said: "Probably the case is in the air." But it was impossible to transport the air, and soon the baker was allowed to return home, and people began to carry bread from Samarkand as before.

This tradition has been preserved to this day. No one leaves Samarkand without the famous bread, which remain soft for a long time.

1. Answer the following questions:

1. What do you know about Samarkand?
2. How can you characterize Samarkand bread?
3. What is tandyr?

4. Why did Bukhara's Khan send people to Samarkand?
5. Why did advisers decide to do to bake the famous bread in Bukhara?
6. What was the baker's explanation about the taste of the bread?
7. Do you know the legend about Samarkand bread?
8. What is your attitude towards the process of advertising?
9. Do you buy products which are advertised? Why?
10. Are these products which are advertised always of good quality?

2. Complete the sentences given below using the verb-phrase "to write a composition". Put the verb "write" in the correct form:

I want to...

I'd like to...

I can't...

I'm looking forward to...

I hope...

I enjoy...

I'm thinking of...

I'd love...

3. Give three forms of the following verbs:

to be, to make, to form, to have, to leave, to take, to carry, to get, to forget, to run, to come, to go, to understand

4. a) Give the antonyms:

variable, greater than, limited, true, increasing, heat, large, to take, different, impossible, to leave, to send, to say, to allow, soft

b) Give the synonyms or synonymous expressions:

tasty, heat, various, to bake, to tell, to bring, to allow, to eat, to preserve, famous, to remain

5. Give the verbs which are correspondent to the following words:

variable, life, weight, dependent, experience, function, notation, form, class, operation, extraction, equation, eatable, comparable, believe, adviser

6. Translate the following text:

Legend of Lavash

It so happened that King Aram was captured by the Assyrian ruler Nebuchadnezzar in one of the battles. Since that was not considered an unconditional victory of one over the other, Nebuchadnezzar declared: “You will not eat for ten days. Then on the 11th day, you and I will have an archery competition. If you win, then you're stronger than me and I'll let you go.”

Aram thought all night, and then he asked for the most beautiful shield to be brought to him from the Armenian army stationed at the borders of Assyria. Nebuchadnezzar had no objections and the messengers of the Assyrian king went to the Armenian camp and conveyed Aram's request. All night the servants of the king contemplated why he needed a shield. When it finally dawned on them, they hid thin pieces of lavash in it and handed it to the messengers.

None of the Assyrians ever heard of lavash – they even did not guess that bread could be hidden inside copper plating. After inspecting the shield, Aram shook his head: “It's not good enough. May I have another?”

Each day before the competition, the messengers went to the border and again brought some lavash hidden inside a shield for Aram. On the eleventh day, Aram and Nebuchadnezzar went to the shooting range. Nebuchadnezzar was convinced that Aram, who had been left without food, would be dispirited and weak. Not even close! Aram was the victor in the contest and returned to his country honourably. It was the lavash that saved him. Returning to his homeland, the king commanded that from that time on only lavash should be baked in Armenia instead of other kinds of bread.

archery – աղեղնաձողություն

shield – վահան

convey – փոխանցել, հաղորդել

contemplate – դիտել, խորհել, մտածել

dispirited – վհատեցված, ընկճված

7. Summarize the text.

Lesson 9

VOCABULARY

staple food	հիմնական, տվյալ վայրի բնորոշ նթերք
locale	վայր, տեղ
versatile	բազմակողմանի, փոփոխական, շարժուն
chunky sauce(s)	թանձր, մսի կտորներով սոուս
cling (clung) onto	կպչել
tubular	խողովակաձև, գլանաձև
a dough	խմոր
a shape	ձև
extrusion	սեղմելով դուրս մղում

Pasta

Pasta is a type of noodle and is a staple food of traditional Italian cuisine, with the first reference dating to 1154. It is also commonly used to refer to the variety of pasta dishes. Typically pasta is made from an unleavened dough of a durum wheat flour mixed with water and formed into sheets or various shapes, then cooked and served in any number of dishes. It can be made with flour from other cereals or grains, and eggs may be used instead of water. Pastas may be divided into two broad categories, dried (“*pasta secca*”) and fresh (“*pasta fresca*”). Chicken eggs frequently dominate as the source of the liquid component in fresh pasta.

Most dried pasta is commercially produced via an extrusion process. Fresh pasta was traditionally produced by hand, sometimes with the aid of simple machines, but today many varieties of fresh pasta are also commercially produced by large scale machines, and the products are broadly available in supermarkets.

Both dried and fresh pasta come in a number of shapes and varieties, with 310 specific forms known variably by over 1300 names having been recently documented. In Italy the names of specific pasta shapes or types often vary with locale. For example the form “*cavatelli*” is known by 28 different names depending on region and town. Common forms of pasta include long shapes, short shapes, tubes, flat shapes and sheets, miniature soup shapes, filled or stuffed, and specialty or decorative shapes.

As a category in Italian cuisine, both dried and fresh pastas are classically used in one of three kinds of prepared dishes. As *pasta asciutta* (or *pastasciutta*) cooked pasta is plated and served with a complementary sauce or condiment. A second classification of pasta dishes is *pasta in brodo* in which the pasta is part of a soup-type dish. A third category is *pasta al forno* in which the pasta incorporated into a dish that is subsequently baked.

Pasta is generally a simple dish, but comes in large varieties because it is a versatile food item. Some pasta dishes are served as a first course in Italy because the portion sizes are small and simple. The servings are usually accompanied by a side of meat. Pasta is also prepared in light lunches, such as salads or large portion sizes for dinner. It can be prepared by hand or food processor and served hot or cold. Pasta sauces vary in taste, color and texture. When choosing which type of pasta and sauce to serve together, there is a general rule that must be observed. Simple sauces like pesto are ideal for long and thin strands of pasta while tomato sauce combines well with thicker pastas. Thicker and chunkier sauces have the better ability to cling onto the holes and cuts of short, tubular, twisted pastas. Sauce should be served equally with its pasta. It is important that the sauce does not overflow the pasta. The extra sauce is left on the plate after all of the pasta is eaten.

1. Answer the following questions:

1. When and how was made pasta?
2. How was fresh pasta produced?
3. How many specific forms of pasta do you know?
4. How can you characterize Italian pasta?
5. The most famous Italian dish is pasta. It is tasty and useful, isn't it?
6. Why are Italian dishes tasty?
7. What are the most popular Italian sauces?

2. What do we say if...? (use the expressions given below)

1. You don't like to have dinner alone.
2. You want to have some bread.
3. You cannot eat anything.
4. You want to have another cup of tea.
5. You are dying of hunger.
6. You are thirsty.

I am hungry as a hunter. I have no appetite. I'd like a drop of water. Let us have dinner together. Pass me some bread, please. May I ask for another cup of tea?

3. Give the adjectives of the following nouns. Make up some sentences.

tradition, type, danger, poison, variety, decoration, region

4. Finish the sentences:

1. It is natural that ...
2. It is strange that ...
3. It is impossible that ...
4. It is absolutely necessary that ...
5. It is very important that ...
6. It is really unbelievable that ...
7. Isn't it strange that ...

5. Give the antonyms:

desired, difference, small, specified, easy, precise, either ...or..., first, to make, to mix, fresh, today, many, to come, to include, long, equal

6. Fill in the gaps with prepositions and adverbs:

1. In the park Bob treated us ____ ice-cream each.
2. There were no vegetables ____ the menu.
3. May I help you ____ some salad?
4. What shall we have ____ dinner today?
5. At noon all workers have a break ____ lunch.
6. Mary said she was invited ____ dinner at her friends'.
7. ____ dessert they served an apple pie.
8. Will you lay the table ____ dinner, Alice?

7. Summarize the text.

Lesson 10

VOCABULARY

pastry	խմորեղեն
quiche	կրեմով կարկանդակ
pasty	մսակարկանդակ
flaky texture	շերտավոր կառուցվածք
crumbly texture	փխրուն, փշրուն կառուցվածք
fruit purées	մրգային այուրե
marzipan	մարցիպան
amateur	սիրող, սիրողական
tart	տորթ
quich	կրեմով կամ լցոնունով տորտ

Pastry. Cakes.

Pastry is the name given to various kinds of baked products made from ingredients such as flour, sugar, milk, butter, shortening, baking powder, and/or eggs. Small tarts and other sweet baked products are called "pastries."

Pastry may also refer to the dough from which such baked products are made. Pastry dough is rolled out thinly and used as a base for baked products. Common pastry dishes include pies, tarts, quiches and pasties.

Pastry is differentiated from bread by having a higher fat content, which contributes to a flaky or crumbly texture. A good pastry is light and airy and fatty, but firm enough to support the weight of the filling. When making a shortcrust pastry, care must be taken to blend the fat and flour thoroughly before adding any liquid. This ensures that the flour granules are adequately coated with fat and less likely to develop gluten. On the other hand, overmixing results in long gluten strands that toughen the pastry. In other types of pastry, such as Danish pastry and croissants, the characteristic flaky texture is achieved by repeatedly rolling out the dough similar to that for yeast bread, spreading it with butter, and folding it to produce many thin layers of folds.

Cake is a form of bread or bread-like food. In its modern forms, it is typically a sweet baked dessert. In its oldest forms, cakes were normally fried

breads or cheesecakes, and normally had a disk shape. Determining whether a given food should be classified as bread, cake, or pastry can be difficult.

Modern cake, especially layer cakes, normally contain a combination of flour, sugar, eggs, and butter or oil, with some varieties also requiring liquid (typically milk or water) and leavening agents (such as yeast or baking powder). Flavorful ingredients like fruit purées, nuts, dried or candied fruit, or extracts are often added, and numerous substitutions for the primary ingredients are possible. Cakes are often filled with fruit preserves or dessert sauces (like pastry cream), iced with buttercream or other icings, and decorated with marzipan, piped borders or candied fruit.

Cake is often the dessert of choice for meals at ceremonial occasions, particularly weddings, anniversaries, and birthdays. There are countless cake recipes; some are bread-like, some rich and elaborate, and many are centuries old. Cake making is no longer a complicated procedure; while at one time considerable labour went into cake making (particularly the whisking of egg foams), baking equipment and directions have been simplified so that even the most amateur cook may bake a cake.

1. Answer the following questions:

1. How is pastry made?
2. How is cake made?
3. What sort of pastry do you prefer?
4. What kind of Danish pastry do you know?
5. What does modern layer cake contain?
6. Which ingredients are necessary for baking a cake?
7. How often do you bake? What is your favourite cake?
8. What products are made from grain?

2. Make up sentences using the words below:

favourite, product, ingredient, butter, bacon, marmalade, toast, pudding, cake, biscuit

3. Ask special questions using the interrogative words in the brackets:

1. Common pastry dishes include pies, tarts, quiches, pasties. (*what?*)
2. Englishmen are fond of good pastry. (*who?*)
3. There are usually two courses in the mid-day meal. (*how many?*)
4. They met during the mid-day meal. (*when?*)
5. Cake is a form of bread or bread-like food, it is typically a sweet baked dessert. (*what?*)

6. Cake is often the dessert of choice for meals at ceremonial occasions, particularly weddings, anniversaries, and birthday. (*what?*)
7. There are countless cake recipes. (*how many?*)
8. Small tarts and other sweet baked products are called “pastries”. (*how?*)

4. Translate the following groups of derivatives into Armenian:

to add – addition – additional – additive – added – adder

to subtract – subtraction – subtractive

to multiply – multiplication – multiplicative – multiple – multiple valued

to divide – dividend – division – divisible – divisibility – divisor

to vary – variety – various – variability

to produce – product – productive – produced – producer

to develop – development – developed – developing – developer

5. Give the past forms of the following verbs and make up some sentences.

Make up 10 sentences in Passive Voice using the given verbs:

to need, to call, to display, to build, to bake, to connect, to divide, to expand, to innovate, to throw, to make, to come, to include, to use, to prepare, to serve

6. Open the brackets using the verb in the correct tense:

1. Do you enjoy _____ (*cook/cooking/to cook*)?
2. When I lived with my parents, I used _____ (*bake/to bake/baking*) during my holidays.
3. When we are in Paris, we usually go _____ (*to shop/shopping/shop*).
4. I used _____ (*to work/work/working*) about the house, but now I don't.
5. I enjoy _____ (*to play/play/playing*) football.
6. When my sister was a little girl, she used _____ (*to collect/collect/collecting*).

7. Summarize the text.

UNIT 3

MEAT AND FISH TECHNOLOGY



Lesson 1

VOCABULARY

backbone	ողնաշար
lumpy	կոշտ, պալարավոր
wiggly	գալարվող
worm	որդ, ճիճու
balloon	օդապարիկ
pattern	նկար, նախշանկար
lacelike	ժանյակածև
polka-dot	սիսեռանախշ
goby	բիչոկ
whale shark	կետաշնածուկ
tiny	շատ փոքր, պստիկ
plankton	պլանկտոն
whale	կաթնասուն կենդանի
mammal, pl. mamalia	
jellyfish	ծովաստղ
clam	ծովային մոլլուսկ
lobster	օմար, ծովախեցգետին
oyster	ոստրե
scallop	խեցի
shrimp	մանր ծովախեցգետին
shellfish	խեցեմորթ
flesh	միս
menhaden	ամերիկյան ծովատառեխ
substance	նյութ
shark	շնածուկ
hammerhead	մրճածուկ
barracuda	բառակուղա
to strip	պոկել
sting	խայթոց
to injure	վիրավորել
poisonous	թունավոր

FISH

Fish are backboneed animals that live in water. There are so many kinds of fish, which differ so greatly in shape, colour and size that it is hard to believe they belong to the same group of animals. Some fish look like lumpy rocks and others like wriggly worms. Some fish are nearly as flat as pancakes, and others can blow themselves up like balloons. Fish have all the colours of the rainbow.

Their rich reds, yellows, blues and purples form hundreds of beautiful patterns, from stripes and lacelike design to polka-dots.

The smallest fish is the Trimmaton, a goby of the Indian Ocean which grows to about 1cm long. The largest fish is the whale shark, which may grow more than 12m long and weigh over 15 tons. It feeds on tiny drifting aquatic organisms called plankton and is completely harmless to most other fish and human beings. The most dangerous fish weigh only a few kilograms. They include the deadly stonefish whose poisonous spines can kill a human being in a few minutes.

Fish have enormous importance to human beings. They provide food for millions of people. People catch them for sport, some keep as pets. In addition fish are important in the balance of nature. Dolphins, porpoises, whales are mamalia. They are also warm blooded. Some animals don't have a backbone. For example, jellyfish, starfish, clams, crabs, lobsters, oysters, scallops, shrimps are shellfish.

Fish benefit people in many ways. Fish make up a major part of the people's diet in Japan and Norway. In other countries people eat fish to add variety to their meals. Fish flesh contains about as much protein as meat does.

Some kinds of fish are caught commercially, but are not good to eat, for example, menhaden. They are for making glue, livestock feed, other products. Goldfish and other small fish scientists often use as experimental animals in medical research. Some fish produce substances used as medicines.

Harmful Fish: Few species of fish, such as a shark, hammerhead, white shark will attack a human being. Barracudas may also attack a swimmer if provoked. Pirenhas are blood thirsty fish with razor-sharp teeth. A group of them can strip the flesh from a human being or an alligator or other large animal in minutes or even seconds. Some other fish, including sting rays and stonefish have poisonous spines that can injure or kill anything that comes in contact with them. The flesh of some fish is poisonous and can cause sickness or death if eaten.

I. Answer the following questions:

1. What is fish?

2. What do fish differ in?
3. Which is the smallest fish in the world?
4. Which is the largest fish in the world?
5. What do whale sharks feed on?
6. What do fish provide?
7. What kind of fish are dolphins and whales?
8. Are there fish that haven't backbone?
9. What is menhaden for? Is it good to eat?
10. What harmful fish do you know?

II. Give Armenian equivalents for the following words and word combinations:

wiggly worms, balloon, polka-dot, flesh, lacelike, harmful, shark, barracuda, to differ, hammerhead, enormous, shellfish, to provide, rainbow, lobster, to weigh.

III. Give English equivalents for the following words and word combinations:

պատկանել, նկար, ողնաշար, նյութ, կարևորություն, պատիկ, փուշ, թունավոր, պոկել, խայթոց, կաթնասուն կենդանի, հավատալ, կենդանի, անվնաս, բարկացնել (դրդել), վտանգավոր

IV. Give synonyms and antonyms for the following words:

hard, beautiful, small, to make, large, to look, a few, to provide, way, human being, important, sickness, to differ, long, to make, water, to live, dangerous, flat, white, sick, death

V. Change the following sentences using Participle I and Participle II:

A person who forgets things is called an absent minded person. – A person forgetting things is called an absent minded person.

1. A person who forgets things is called an absent minded person.
2. A person who checks tickets at the railway station is called a ticket collector.
3. A person who sells things in a shop is called a shop assistant.
4. A person who is consulted by people on legal matters is called a lawyer.
5. A person who stages performances in the theatre is called a producer.
6. A person who consults a lawyer is called a client.
7. A person who is invited to a party is called a guest.
8. A person who is served in a shop is called a customer.
9. A person who is painted is called a model.
10. A person who invites guests to a party is called a host.
11. A person who paints is called an artist.

VI. Translate the following text:

Fishing Techniques

Fishing techniques are methods for catching fish. The term may also be applied to methods for catching other aquatic animals.

Fishing techniques include hand gathering, spearfishing, netting, angling and trapping. Fishers use different techniques, and also, sometimes, the same techniques. Recreational fishers fish for pleasure or sport, while commercial fishers fish for profit. Artisanal fishers use traditional, low-tech methods, for survival in third-world countries, and as a cultural heritage in other countries. Mostly, recreational fishers use angling methods and commercial fishers use netting methods.

There is an intricate link between various fishing techniques and knowledge about the fish and their behaviour including migration, foraging, and habitat. The effective use of fishing techniques often depends on this additional knowledge. Which techniques are appropriate is dictated mainly by the target species and by its habitat.

Fishing techniques can be contrasted with fishing tackle. Fishing tackle refers to the physical equipment that is used when fishing, whereas fishing techniques refers to the manner in which the tackle is used when fishing.

VII. Summarize the text:

Lesson 2

VOCABULARY

jaw	ծնոթ
temperate	բարեխառն, մեղմ
transparent	թափանցիկ, պարզ
surface	մակերես, մակերևույթ
flash	բռնկում
to flash	բռնկվել, փայլատակել
slender	բարակ, նուրբ
to cling-clung	կպչել, կառչել
suction	կպչող, ծծվելով կպցնելը
pale	ցից
scale	չափացույց
skeleton	կմախք, հիմնակմախք
fin	լողաթև
muscle	մկան
respiratory	շնչառական, շնչառության
digestive	մարսողական
reproductive	վերարտադրողական

WHERE FISH LIVE

There are about 21.700 kinds of fish. Fish are divided into two main groups: jawed and jawless. About 13.300 species live in the ocean. These saltwater or marine fish live in endless variety of ocean environments. Many saltwater species live in warm water, others around coral reefs in the Indian and Pacific oceans. Some live in neither very warm nor very cold water. The cold waters of the Arctic and Antarctic oceans have fewer kinds of fish than do

tropical and temperate waters. Their blood is nearly transparent rather than red. Different kinds of fish also live at different depths in the ocean. The largest and fastest swimming fish live in the open ocean. Many kinds of ocean fish live in midwater and in the depths than near the surface. Most of them have light organs, than flash on and off in the darkness. Many have large eyes and mouths, long, slender, painted tails.

Fish live in every continent, except Antarctica. Some fish can cling to rocks with their mouth or with some special suction organs. A number of them never see daylight. Most of them have pale. A few kind of freshwater fish live in hot springs, where the temperature rises as high as 40⁰C. Fish have various shapes, skin and colour, scales, skeleton, fins and muscles, respiratory system, digestive system, circulatory system, nervous system, reproductive system.

I. Answer the following questions:

1. How many kinds of fish are there?
2. What main groups do you know?
3. Where do fish live?
4. Where do many saltwater species live?
5. What colour is their blood?
6. Where does the largest and fastest swimming fish live? What fish is it?
7. Do fish live in hot springs?
8. Do fish live on every continent?
9. What are fish different in?
10. How do some fish cling to rocks?

II. Give Armenian equivalents for the following words and word combinations:

saltwater, marine fish, environment, surface, to flash, slender, spring, skeleton, fins, skin, colour, suction, scale, to divide, variety, temperate waters.

III. Give English equivalents for the following words and word combinations:

ցերեկային լույս, ստորջրյա ժայռ, խորություն, պղչ, թափանցիկ, կառչել, ցից, կմախկ, լողաթև, վերարտադրողական համակարգ, մարսողական սիստեմ, արյուն, մթություն

IV. Give synonyms and antonyms for the following words:

to live, the fastest, long, except, never, different, to open, near, daylight, to divide, salt water, large, high, cold

V. Translate the following text into Armenian:

ALL ABOUT SNOW-FLAKES

There are no two snow-flakes which are exactly alike. Millions and millions of snow-flakes fall during every snowstorm, but each snow-flake is different in some way from all others, though all snow-flakes are flat, six-sided figures. Perhaps the biggest snow-flake ever fell in Montana, the USA during the winter of 1887. The snow-flakes were 15 inches wide and 8 inches thick.

Grey snow has fallen in Japan, and black snow in France. We say “as white as snow”, but on January 31, 1925, the Japanese, and on December 6, 1926, the French laughed as they repeated this expression. For on the first date, snow fell in Japan and on it was grey; and on the second date, snow fell in France and it was black!

The Japanese scientists explained that the event was due to a mixture of snow and ashes from near-by volcanoes. The French, however, could not offer any explanation. They just looked at the snow and shrugged shoulders.

VI. Put the verbs in brackets into the correct form:

Commercial Fishing

Commercial fishing _____ (to be) the activity of catching fish and other seafood for commercial profit, mostly from wild fisheries. It _____ (to provide) a large quantity of food to many countries around the world, but those who _____ (to practice) it as an industry must often pursue fish far into the ocean under adverse conditions. Large-scale commercial fishing _____ also (to be known) as industrial fishing. The major fishing industries _____ (not to be owned) only by major corporations but by small families as well.

Commercial fishermen _____ (to harvest) a wide variety of animals, ranging from tuna, cod, carp, and salmon to shrimp, lobster, clams, and crab, in various fisheries for these species.

There _____ (to be) large and important fisheries worldwide for various species of fish. Commercial fishing may offer an abundance of jobs, but the pay _____ (to vary) from boat to boat, season to season.

VII. Summarize the text:

Lesson 3

VOCABULARY

to prohibit	արգելել, թույլ չտալ
scale	թեփուկ
notwithstanding	չնայած, այնուամենայնիվ
to reject	չընդունել, հրաժարվել
priest	քահանա, քրմապետ
to oblige	պարտավորեցնել, պարտադրել
brine	աղաջուր
liver	լյարդ
red mullet	արքայածուկ
dainty	դելիկատես
sturgeon	թառափ
spawn	ծկնկիթ
tinge	երանգավորում, երանգ
curdy	կտրված, մակարդված
ling	ծովային գայլածուկ
cod	ծողածուկ
haddock	իշածուկ
salmon	սաղմոն
mackerel	թյունիկ, սկունբրիա
herring	հարինգ, ծովատառեխ
trout	կարմրախայտ

FISH AND ANCIENT PEOPLE

Among the Jews of old it was very little used. Moses prohibited only the use of such as had neither scales nor fins. The Egyptians made fish an article of diet, notwithstanding that it was rejected by their priests. Epicures dried it in the sun, salted and preserved on days of great solemnity. Late Greeks made very little use of fish. In Homer's heroes, Menelaus had been obliged to live upon fish. The love of fish among the ancient Romans rose to a real mania. A prize was offered to anyone who could invent new brine compounded of the liver of red mullets. Lucullus had a canal cut through a mountain that fish might be transported to the gardens of his villa.

Ancient British inhabitants ate no fish. By the time of Edward II, fish had in England become a dainty, especially the sturgeon which was permitted only on no table but that of the king. Fish before the spawn are best in condition. After spawning they are out of season, and unfit for human food, it has a transparent, bluish tinge, in season its muscles are firm and boil white and curdy.

As food for invalids white fish, ling, cod, haddock are the best. Salmon, mackerel, herrings, trout soon spoil after they are killed, that's why they should be prepared on the day they are caught. Flat fish keep longer.

I. Answer the following questions:

1. Did ancient people use fish?
2. Did Egyptians and Greeks use fish?
3. What was a prize offered for?
4. Did ancient British inhabitants eat fish?
5. What fish was permitted only on the king's table in England?
6. When are fish best in condition?
7. When are fish out of season?
8. How is fish in season?
9. What kind of fish can we keep longer?
10. When do salmon, mackerel, herrings spoil?

II. Give Armenian equivalents for the following words and word combinations:

to invent, to spoil, to keep, notwithstanding, priest, inhabitant, prize, dainty, to prohibit, ling, tinge, to reject, curdy, to oblige, muscle, to offer, salmon.

III. Give English equivalents for the following words and word combinations:

լողաթև, սար, բռնել, հատկապես, դեղիկատես, քահանա, լյարդ, ձողաձուկ, արքայաձուկ, ձկնկիթ, կարմրախայտ, ծովատառեխ, թեփուկ, թափանցիկ, պատրաստել

IV. Give synonyms and antonyms for the following words:

new, to permit, ancient, mountain, clean, soon, to catch, to cut, love, to make, to dry, love, to offer, little, to invent, best.

V. Put the verbs in brackets into the correct form:

WEATHER

The weather (*to be*) a subject we can always talk about. It often (*to change*) and (*to bring*) cold and heat, sunshine and rain, frost and snow. On day (*to be*) often unlike the next. In summer the sun (*to shine*), often there (*to be*) no wind and there (*to be*) no clouds in the sky which (*to be*) blue and beautiful. We can see stars and the moon at night and people (*to like*) walks, outdoor games and sports in the fresh air.

When autumn (*to come*), the days (*to become*) shorter and colder. It (*to get*) dark earlier and often heavy clouds (*to cover*) the sky bringing rain with them. Sometimes there (*to be*) heavy rain, so that an umbrella or a raincoat is necessary if we (*not to want*) to get wet through. At last frost and snow (*to come*).

Fields, forests and houses (*to be*) covered with snow and rivers and lakes with ice. But spring again (*to bring*) sunshine and warm winds. Spring (*to bring*) sunshine, green grass and flowers.

VI. Choose the correct word:

1. There are (too, two) beds in the bedroom. They have a cupboard (too, two).
2. These (road, rode) leads to that village. I (road, rode) a bicycle yesterday evening.

3. You will (write, right) me a letter, won't you? Before crossing the street look on the (write, right).
4. (I, eye) can't paint at all. There is something wrong with my (I, eye).
5. We all like roasted (meet, meat). They usually (meet, meat) near the lake.
6. There are seven days in a (week, weak). He was so (week, weak) after his illness.
7. The family lives at the (see, sea). Birds can (see, sea) far.

VII. Summarize the text

Lesson 4

VOCABULARY

canned	պահածոյած
nutrient	սննդարար նյութ
cured	պահածոյած
frozen	սառեցրած
anchovy	անձրուկ
sardine	սարդինա
tuna	թյուննոս
flounder	մանր տափակածուկ
carp	ծածան
whitefish	սիգ
hook	կարթ
spear	եռաժանի
trap	թակարդ
vessel	նավ
spoilage	փչացում, փչանալը

FISHING INDUSTRY AND MARKETING

Fishing Industry is an important economic activity that provides food and jobs for millions of people. The Fishing Industry includes all the activities involved in the commercial and recreational production of fish and seafood. The catching, processing, marketing, conservation of fish and seafood are all parts of the industry. Fish are an excellent source of protein, one of the chief nutrients that people need for a good diet. The fish are sold fresh, canned, cured, frozen. In addition, about a third of the world's fish is used to produce high-quality animal feed and various industrial products.

The Fishing Industry catches many kinds of fish, such as anchovies, capelin, herring, mackerel, sardines, tuna, cod, flounder, carp, whitefish.

Japan is the leading fishing country in the world. People have fished for thousands of years. They have used hooks, spears, nets, traps, huge nets. Refrigeration systems aboard the vessels help prevent the catch from spoiling. A number of international commissions were formed to promote fish conservation

and to help settle disputes over fishing rights. In 1970 all nations bordering the sea established fishery conservation zones – exclusive economic zones. Countries that have adopted such zones claim authority over all fishing and ownership of all fish and other natural resources.

Fresh fish may be sold daily in fishing ports located near fishing areas. First it must be processed to prevent spoilage. Many fishing crews sell their catches to processors at auctions after fishing trips. The price depends on the supply of fish at the market and the demand for it. The fishing crew does not know in advance what a harvest will earn. Processors place orders with the cooperative for a specific quantity of fish, before a fishing trip. At the same time both sides agree on the price to be paid for the catch. Processors sell most of their fish products to fish brokers in large cities, and the fish brokers to restaurants and food stores.

I. Answer the following questions:

1. What does fishing industry provide?
2. What parts of fishing industry do you know?
3. What are fish used for?
4. What kinds of fish does the fishing industry catch?
5. What did people use to fish?
6. When were fishing conservation zones established? What are these zones for?
7. What country is the leading fishing one in the world?
8. Where may fresh fish be sold?
9. What does the price depend on?
10. Who do fish brokers sell fish to?

II. Give Armenian equivalents for the following words and word combinations:

to provide, shellfish, excellent, nutrient, canned, various, herring, cod, cured, net, vessel, to prevent, frozen, spoilage, demand, to depend on, rights, economic zone, market

III. Give English equivalents for the following word combinations:

թարմ, ծածան, սիգ, կարթ, թակարդ, կարևոր, գործունեություն, արդյունաբերություն, բարձր որակ, թարմ ձուկ, փչացնել/փչանալ,

մատակարարում, քանակ, աշխարհ, բռնել, տարածություն/զոնա, Գավակազմ

IV. Give synonyms and antonyms for the following words:

price, to produce, huge, zone, daily, various, must, harvest, city, store, vessel, job, to locate, quantity, good, near, first, to help, to catch, high.

V. a) Use Present Perfect or Past Indefinite:

1. I (*to see*) the doctor. I (*to see*)him two hours ago. 2. My friend (*to be*)therelast winter. 3. The postman (*to bring*)a letter for you. He (*to bring*)the letter half an hour ago. 4. She always (*to send*) letters to her brother who lives in London. I (*to send*) Christmas postcards to my friends last week.

b) Use Future Indefinite or Present Indefinite:

1. If the wind (*to blow*), we (*not to go*) to the forest. 2. I (*to write*) to you, when I (*to come*) to Yerevan. 3. I (*to take*) an umbrella, if it (*to rain*). 4. Next summer we (*to spend*) at the seaside. 5. I (*to visit*) you next Sunday. 6. If the weather (*to be*) fine, we (*to walk*) in the forest.

VI. Complete the sentences using the model:

The traveler is one who travels.

1. The hunter is one who ...
2. The discoverer is one who ...
3. The sailor is one who ...
4. The seller is one who ...
5. The fighter is one who ...
6. The teacher is one who ...
7. The painter is one who ...
8. The worker is one who ...
9. The builder is one who ...
10. The driver is one who ...

VII. Summarize the text.

Lesson 5

VOCABULARY

to prey on	որս անել, որսալ
to decline	վատանալ, վատթարանալ
enzyme	ֆերմենտ
tissue	հյուսվածք
moisture	խոնավություն
pickled	թթու դրած
to drain off	ցանաքեցնել, չորացնել
to soak	թրջել, հեղուկի մեջ դնել
smouldering	թույլ վառվող
flavour	բուրմունք
pressure	ճնշում, սեղմելը
wrapper	փաթեթ
to fillet	առանձնացնել ֆիլեն
to debone	առանձնացնել ձուկը ոսկորներից
to bread	թաթախել, թավալել չորահացի մեջ
to mince	մանր կտրատել, աղալ
shrimp	մանր ծովախեցգետին
to squeeze	մզել, քամել
device	հարմարանք, մեխանիզմ
centrifuge	ցենտրիֆուգա
lubricant	քսուք, քսանյութ

FISHERY CONSERVATION

Countless fish die of natural causes or are eaten by animals that prey on them. A rich fishery will continue to support good catches as long as the stock can produce large number of young annually. The quantity of fish declines rapidly after they die. Bacteria that can cause spoilage immediately begin to attack the fish, and enzymes start to break down the protein in fish tissues.

Drying, salt curing, smoking have been used to process fish for thousands of years. All three methods reduce the moisture content of fish and thus slow the growth of bacteria and breakdown of protein. Drying fish in the open air for six weeks or more removes most of the water from them. Drying is generally used along with salt curing and smoking.

In salt curing processors first cut open the fish and remove the head and the backbone. Then they cover the fish with salt, which draws out the moisture and produces a salty solution called brine. Next, the fish are dry salted or pickled.

In dry salting the brine is drained off, the fish are hung up to dry. In pickling the fish are stored in the brine. For smoking, processors first cut up the fish and soak them in brine. Then they place the fish in a large oven, where smoke and heat from smouldering wood chips dry the fish. Processors use this method chiefly to improve the flavour of fish. Canning involves sealing cut up fish in metal or glass containers and then cooking the contents under pressure. The high temperature and pressure kill bacteria. Freezing also prevents the growth of bacteria and protein breakdown. The quickly frozen fish are packaged in airtight wrappers or covered with a thin layer of ice. They are stored at -29°C or lower. Much of the catch of such fish as cod and flounder is filleted (deboned) and frozen often in large blocks. These blocks may then be made into fish sticks and meal-sized portions of breaded fish. Fish may be minced before freezing to make surimi, a fish paste with high protein content. In Japan it is used mainly to make fish cakes. Surimi is used in the USA and Canada to make imitation shellfish products, including imitation crab legs and shrimp.

Other methods are used to produce meal and oil from fish. These industrial products are made from such species as anchovies, herring, sardines and menhaden. To produce fish meal and fish oil, processors first cook the fish steam. Then they squeeze out most of the water and oil. The remaining solid material is dried and ground into meal. Fish oil is obtained by separating the oil from the water in a device called a centrifuge. Fish meal is added to livestock feed and dry pet food. Manufactures use fish oil to make a number or products, including glue, paint, lubricants and ink.

I. Answer the following questions:

1. When does the quality of fish decline?
2. How many methods are there?
3. What do these methods reduce?
4. What do processors do in salt curing?
5. What do processors do in dry salting?
6. What do processors do in smoking?
7. What is canning?
8. What is surimi? How is surimi made and used?
9. How do processors produce fish meal and fish oil?
10. What are fish meal and fish oil used for?

II. Give Armenian equivalents for the following words and word combinations:

to prey on, moisture, salty solution, brine, flavour, to mince, to squeeze (out), livestock, shrimp, trout, salmon, lubricant, backbone, countless, spoilage, centrifuge, to soak, oil, species

III. Give English equivalents for the following words and word combinations:

Ֆերմենտ, թթու դրած, ողնաշար, բուրմունք, փաթեթ, սիրած կենդանի, ներկ, թավալել չորահացի մեջ, մեխանիզմ, սոսինձ, անմիջապես, հյուսվածք, ծուխ, տաքություն (շոգ), բարելավել, սառույց, թանաք, դուրս հանել (քաշել), թույլ վառվող, առանձնացնել ֆիլեմ

IV. Give synonyms and antonyms for the following words:

to reduce, high, to produce, quantity, cake, to raise, to begin, rapidly, to eat, to die, open, first, heat, long, young, to reduce

V. Translate the following text and try to retell:

AN EXPENSIVE HORSESHOE.

The English king Richard the Lion Heart was a tall and strong man. He was proud of his strength and often liked to show how strong he was.

Once as he was riding on horseback in the country-side he suddenly noticed that his horse had lost one of its shoes. Luckily, he was not far from a little village and soon he found a blacksmith. "Give me a good horseshoe", he

said to the man. The blacksmiths chose a horseshoe and gave it to him. Richard took it in his hands and broke it in two.

“This horseshoe is not good,” he said to the blacksmith, “give me a better one”. The blacksmith gave him another but Richard broke it almost as easily as the first one.

The blacksmith was surprised, but he did not say a word. He found another horseshoe and offered it to the king. This time Richard seemed to be satisfied and ordered the blacksmith to shoe his horse.

When the work was done, Richard offered the man a coin. The blacksmith took the coin, looked at it, and putting it between his fingers, broke it in two.

Now it was Richard’s turned to be surprised. He took a larger coin out of his pocket and handed it over to the blacksmith. The man broke it again with the same ease, adding: “This coin is not good, give me a better one!” Richard smiled, handing the man a gold coin and said: “Your horseshoe is rather expensive, my friend, but I am glad to have met a man who is as strong as I am. I should like to have you in my army.”

VI. Put the verbs in brackets into the correct form:

The History of Fishing

Fishing _____ (to be) an ancient practice. People in Eastern Asia _____ (to consume) freshwater fish 40.000 years ago. Archaeological features such as fish bones, shells, and cave paintings _____ (to show) that sea food were important for survival and consumed in significant quantities. During this period, most people _____ (to live) a hunter-gatherer lifestyles and _____ (to be) constantly on the move. Spearfishing with harpoons _____ (to be) widespread.

The Neolithic culture and technology _____ (to spread) worldwide between 4.000 and 8.000 years ago. With the new technologies of farming basic forms of the main fishing methods _____ (to appear) that (to be used) still today.

The ancient river Nile _____ (to be) full of fish. Fresh and dried fish _____ (to be) the main food for much of the population. The Egyptians _____ (to invent) various implements and methods for fishing. Simple boats _____ (to serve) for fishing. Woven nets, baskets made from willow branches, harpoons and hook and line were all being used.

Fishing boats _____ (to be) typically small and _____ (to be used) only close to the shore.

The pearl fishery _____ (to be known) as early as the 1st century
B.C.

VII. Summarize the text.

Lesson 6

VOCABULARY

beef (pl. beeves)	տավարի միս
veal	հորթի միս
hog	խոզ
lamb	գառ, գառնուկ
mutton	ոչխարի միս
poultry	ընտանի թռչուններ
game	որսի միս
to maintain	պահել, պահպանել
abundant	առատ, հարուստ, լի
to aid	օգնել, աջակցել
to release	բաց թողնել, արձակել
cell	բջիջ
pellagra	պելագրա
copper	պղինձ
phosphorus	նոսֆոր
zinc	ցինկ

MEAT AND ITS VALUE

Meat is animal flesh that is eaten as food. Meat consists largely of muscles, but other animal tissues are also considered meat. The most commonly eaten meats come from are cattle (beef and veal), hogs (pork), sheep (lamb and mutton) and poultry (chicken, duck, turkey). Game, which is meat from wild animals, is also frequently eaten. Fish is included among meat-producing animals.

Meat is mainly composed of water and protein, and is usually eaten together with other food. It is edible raw, but it is normally eaten after it has

been cooked and seasoned or processed in a variety of ways. Unprocessed meat will spoil within hours or days.

Meat consumption varies worldwide, depending on cultural or religious preferences, as well as economic conditions. Vegetarians choose not to eat meat because of ethical, economic, environmental, religious or health concerns that are associated with meat production and consumption.

Most nutritionists consider meat an important part of a well-balanced diet. Meat provides us with protein, vitamins, minerals necessary for good health and growth. Meat protein contains essential elements needed to build and maintain body tissue. Red meat is an excellent source of the vitamin B complex group. Thiamin (B₁) is especially abundant in pork. It maintains the circulatory and nervous system and aids the body in storing and releasing energy. Vitamin B₂ is needed for normal growth and healthy skin. Vitamin B₆ prevents nervous disorders and skin diseases and vitamin B₁₂ maintains red blood cells. Niacin is important in preventing disease called pellagra. Liver has vitamins A and C. Meat is rich in iron, copper, phosphorus, zinc and fat.

I. Answer the following questions:

1. What is meat?
2. What does meat consist of?
3. What is called game?
4. Which are the most commonly eaten meats?
5. Why do nutritionists consider meat an important part of diet?
6. What vitamin is abundant in pork? What does it maintain?
7. What does vitamin B₆ prevent?
8. What disease does niacin prevent?
9. What is meat rich in?
10. Why don't vegetarians eat meat?

II. Give Armenian equivalents for the following words and word combinations:

to consist of, an important part, flesh, tissue, frequently, a nutritionist, to consider, to be abundant in smth, to maintain, to provide, cell, to release, good health and growth, circulatory system, nervous system, nervous disorders, to be rich in smth.

III. Give English equivalents for the following words and word combinations:

վայրի կենդանիներ, հաճախ ուտվող, մկան, տավարի միս, գառ, ընտանի թռչուններ, հորթի միս, ոչխարի միս, ֆոսֆոր, մաշկային հիվանդություն, որսի միս, ցինկ, արյան բջիջներ, պղինձ, կանխել, հատկապես

IV. Give synonyms and antonyms for the following words:

disease, to consider, frequently, to build, large, to eat, excellent, to call, remarkable, necessity, to come, important, rich, large, good, wild animals, to build, normal, to prevent

V. a) Change the following sentences using Participle I:

1. When he was walking up the street, he met a strange elderly man. 2. The officers who stood before him asked him to show them his things. 3. As he felt bad he decided to see a doctor. 4. The hostess came up to each guest and offered coffee. 5. As he had no sense of humour he couldn't enjoy the joke.

b) Change the following sentences using Participle II:

1. The things, which are left behind by passengers, are taken to the Lost Property Office. 2. The audience, who were greatly impressed by the acting, repeatedly called the actors. 3. The new job which has been offered to me seems more interesting. 4. I could hardly recognize the street which was reconstructed while I was away. 5. The exploration work, which is carried on in this region, is of great importance for science. 6. Food which is served at this restaurant is usually very good.

VI. Translate the following text and answer the questions:

The Hamburger

You probably think that the hamburger is a typical American food. Americans often have a hamburger for a quick lunch or snack. But do you know that the favourite American “fast food” actually comes from many different countries. The hamburger is made of beef, not ham. The idea of chopping meat into very small pieces comes from Turkey. The name hamburger comes from the town of Hamburg in Germany. The pickle, or pickled cucumber, comes from Eastern Europe. It is popular in Poland and Russia. The word ketchup comes from China. “Ke-tsiap” is the Chinese name for a sauce made of pickled fish and spices. The first recipe for tomato ketchup is in a 1792 American cookbook. Mayonnaise, sometimes called “mayo”, is yellow-white sauce made of eggs, oil and lemon juice. It comes from the Spanish island of Minorca, but its name is

French. Mayonnaise is also used as a dressing for salads. The bun is a kind of bread. It comes from an English recipe, and the sesame seeds on top come from the Middle East.

So, the “American” hamburger is a truly international meal!

1. What different countries does the hamburger come from?
2. What other food products is a hamburger made of?
3. What do you need to make your favourite sandwich, snack, or dessert?

VII. Summarize the text

Lesson 7

VOCABULARY

mild	մեղմ
calf (pl. calves)	հորթ
fleck	բիծ
coarse	կոշտ,
pork	խոզի միս
gland	զեղձ
brain	ուղեղ
kidney	երիկամ

KINDS OF MEAT

There are several types of red meat. The names of meat from cattle and sheep tell the age of the animal from which the meat was taken.

Red meat is meat that is red before it is cooked such as beef or lamb, and dark after you have cooked it. Meat that is pale after you have cooked such as chicken or pork is called white meat. White meat is also meat from the top part of a bird, for example its breast.

Veal is the flesh of calves less than 14 weeks old. It is tender than beef and has a milder flavour. Meat from calves over 14 weeks is called calf. Beef is the flesh of full grown cattle. Most beef sold at stores comes from animals 1 to 2 years old. Beef is bright red and has white fat. Flecks of fat make beef tasty and juicy.

Lamb is the flesh of sheep less than 1 year old. It is red and has white fat. Lamb has a milder taste than mutton. Mutton is the flesh of sheep over 1 year old. Its colour is red and purple. It has stronger flavour and coarser texture than lamb. Pork is the flesh of hogs. Most pork comes from animals from 4 to 7 months old. Its colour is light pink with white fat. It has mild taste. Many cured meats such as ham and bacon are made from pork.

Poultry is meat from birds such as chickens.

Variety meat is a general name for various organs, glands, brain, hearts, kidneys, livers, tongues and so on.

I. Answer the following questions:

1. What do the names for the meat tell?
2. What kinds of meat do you know?
3. What is called beef?
4. What is called veal?
5. How do we call the flesh of sheep less than one year old?
6. How do we call the flesh of sheep over one year old?
7. What is pork?
8. What are made from pork?
9. What is called variety meat?
10. What is read meat? What is white meat?

II. Give Armenian equivalents for the following words and word combination:

veal, fleck cattle, sheep, calf, flavour, tender, purple, bacon, kidney, ham, cured meat, store, texture, mild, coarse, different, white fat, several, age

III. Give English equivalents for the following words and word combinations:

բուրմունք, գույն, շատ, խոշոր եղջերավոր անասուն, լյարդ, ուղեղ, տավարի միս, գառ, խոզի միս, երիկամ, խոզ, համեղ, տարբեր, սիրտ, լեզու, ամիս, օգնել

IV. Give synonyms and antonyms for the following words:

several, to tell, type, odour, flesh, shop, to come, old, tint, hog, bright, light, to make, different, old, white, strong, juicy

V. Read and translate the text:

MEALTIMES

Two things never fail to confuse foreigners when they come to Britain: cricket and British meals. However, whereas the visitor can live without understanding cricket, it is almost impossible to survive without an understanding of British eating habits.

Understanding British meals is one of the great mysteries to the foreign visitor. Over the centuries, the British have shown a tendency to name and re-name their meals, and to move them about the day in an apparently random fashion. Different names to each meal depend on the social class and part of the country people live in.

Breakfast, which was once taken at 5 o'clock in the morning, can now be at any time before 11.30. It has thus overtaken dinner. In Norman times – 12th century – dinner was at 9am; by the 15th century it had moved to 11am; and today it can be eaten at any time between noon and 2.30 in the afternoon and is called lunch by a large proportion of the population, especially the middle and upper classes and people from southern Britain. Many farm labourers, however, who start work at sun-rise and have their breakfast before they go to work, still stop for a lunch break at about 9 o'clock.

In the 14th century, supper was at 4 o'clock – which is now called tea-time. But outside the south-east of England, working families have tea or high tea at about 6 in the evening while the rest of their fellow-countrymen have dinner, which is often also called supper, at about 7.30pm.

Fill in the gaps in these sentences:

1. The British have a meal in the morning before they go to work; usually call it...
2. They then have a meal in the middle of the day; this is called ...
3. After work, they sit down to an evening meal; this is called ...
or...or...or...

VI. Choose the necessary word:

1. Mother gave me a cup of (carrot, milk).
2. Ann bought a box of (meat, sweets) for her husband.
3. Nelly brought a pail of (cheese, potatoes).
4. Mary puts (sugar, salt) into the cabbage soup.
5. Do you put (sugar, salt) into tea?
6. Father always drinks coffee with (butter, milk) in the morning
7. We usually have fish with (jam, potatoes).

8. Will you bring me a plate of (juice, soup)?
9. Don't forget to put (butter, pudding) into the cake.

VII. Summarize the text

Lesson 8

VOCABULARY

to broil	տապակել
to roast	խորովել
coal	ածուխ
griddle	կոթով տապակ
shallow	ոչ խոր
to braise	շոգեխաշել
liquid	հեղուկ
to simmer	եռ գալ, մեղմ եռալ
to stew	մարմանդ կրակով եփել
bouillon	բուլյոն, մսաջուր
fragrant	բուրավետ, ամուշահոտ
broth	մսաջուր, խաշուկ
lean	ոչ յուղալի (միս), անճարպ
to evaporate	գոլորշիանալ
odour	հոտ, բուրմունք
to grind-ground	աղալ, աղեցվել
to powder	փոշի դարձնել

HOW MEAT IS COOKED. MEAT EXTRACT

There are 2 main ways to cook meat: with dry heat and with moist heat. The method is determined by a meat's cut and degree of tenderness.

Dry heat methods include broiling, pan-broiling, roasting, pan-frying, deep fat frying. Broiling meat is cooked directly above or below a source of heat. Meat may be broiled on a grill over hot coals or under the heating element of an open oven.

In pan-broiling meat is cooked in a small amount of fat over low heat. In deep fat frying meat is covered by hot fat.

Moist heat methods such as braising and cooking in liquid are best for less tender meats. In braising meat is placed in a tightly covered pan at a low temperature. The meat cooks in its own juices or in other liquids. Simmering and stewing are two ways to cook meat in liquid. Meat is simmered just below the boiling point. In stewing the meat is slowly boiled in a covered pot or pan.

Meat extract is a paste with highly concentrated meat flavour. You can cook flavour soups and sauces with meat extract. Food manufactures use beef extract or chicken extract in making bouillon cubes. When dissolved in hot liquid, these cubes produce a fragrant broth. They boil fresh, lean, meat in a vacuum kettle. They boil until it loses nearly all its colour and the water turns brown. Then they remove the meat and boil the juice until all the liquid has evaporated. Meat extract has a yellowish-brown colour and a pleasant meaty odor and flavour. It has little food value though it contains some protein and minerals. The boiling meat is ground or powdered and put back in the broth.

I. Answer the following questions:

1. How many ways of cooking meat do you know?
2. How is the method of cooking the meat determined?
3. What dry heat methods do you know?
4. What moist heat methods do you know?
5. What is called meat extract?
6. What are beef or chicken extract used for?
7. How are the bouillon cubes used?
8. How are the bouillon cubes used?
9. What does meat extract contain?
10. What colour and flavour does meat extract have?

II. Give Armenian equivalents for the following words and word combination:

degree of tenderness, oven, fat, main, dry heat, moist heat, broiled meat, hot coals, shallow pan, liquid, to braise, low temperature, high temperature, fragrant, broth, lean meat, odour, to determine, food value

III. Give English equivalents for the following words and word combinations:

ոչ խոր, փոշի դարձնել, գոլորշիանալ, եռ գալ (եռալ), աղալ, խորովել, ածուխ, բուլյոն, մսաջուր, ապուր, թարմ միս, դեղնավուն գույն, հաճելի, պարունակել, ետ դնել, կոթով տապակ, պատրաստել, լուծ(վ)ել

IV. Give synonyms and antonyms for the following words:

odour, to cook, small, bouillon, value, below, high, to be pleasant, to close, hot, moist, the best, lean meat, deep

V. a) Read and translate the text:

LESS COFFEE, FEWER HEART ATTACKS

A person drinking coffee five or more cups a day has more than twice the risk of having heart problems than one who drinks no coffee at all.

Over 1.000 men were surveyed at five-year intervals for up to 25 years on their coffee use. One major finding was that even when other factors – smoking, blood pressure, cholesterol level, and age – are taken into account, there is still a greater risk of heart trouble among coffee drinkers.

In order to lessen that risk, doctors advise that coffee drinkers besides quitting smoking and having their cholesterol levels checked, should be prudent in their coffee intake.

b) Use the pairs of words with opposite meanings in the sentences of your own:

Example: Pete turned *left*, and Mike turned *right*.

It was *warm* yesterday, and it is *cold* today.

slow – fast, to open – to close, right – left, to take – to give, early – late, hot – cold, to – from

VI. Put the verbs in brackets into the correct form:

Sausage

A sausage _____ (to be) a food usually made from ground meat with a skin around it. Sausage making _____ (to be) a traditional food preservation technique. Sausage may _____ (to be preserved) by curing, drying, or smoking. Sausages (to be) among the oldest of prepared foods, whether cooked and eaten immediately or dried to varying degrees.

The word sausage _____ (to be derived) from the Latin word “salsus” meaning “salted”. The most basic sausage _____ (to consist) of meat, cut into pieces or ground, and filled into casing. The meat may _____ (to be) from any animal, but traditionally it _____ (to be) pork, beef, or veal.

Cooked sausages _____ (to be made) with fresh meats, and then fully cooked. They _____ (to be) either eaten immediately after cooking or must be refrigerated. Examples _____ (to include) hot dogs and liver sausage.

Cooked smoked sausages _____ (to be) cooked and then smoked or smoke-cooked. They _____ (to be eaten) hot or cold, but need to be refrigerated. Some (to be) slow cooked while smoking, in which case the process takes several days or longer.

Fresh sausages _____ (to be made) from meats that have not been previously cured. They must _____ (to be refrigerated) and thoroughly cooked before eating.

Dry sausages _____ (to be) cured sausages that are fermented and dried. Some _____ (to be) smoked as well at the beginning of the drying process. They (to be) generally eaten cold and will keep for a long time.

Vegetarian sausage _____ (to refer) to sausages made without meat, for example, with soya protein or with tofu or with herbs and spices.

VII. Summarize the text:

Lesson 9

VOCABULARY

to thaw	հալվել, հալեցնել
to seal	գլոցափակել, մակափակել
gravy	սոուս, թանձր կերակրանյութ
primary	հիմնական, գլխավոր
to pump	պոմպով քաշելով լցնել
to cure	պահածո պատրաստել
solution	լուծույթ
to inject	ներարկել
distinctive	բնորոշ, հատկանշական
sawdust	սղոցուկ, թեփ
to draw-drew-drawn	մաշել, ներս քաշել
brain	ուղեղ
lard	խոզաճարպ

CURING AND SMOKING

Meat is available in fresh, frozen, canned and cured forms. Fresh meat is raw meat. It spoils quickly and must be refrigerated until it is cooked. People can keep fresh meat from spoiling by freezing it. Frozen meat is also sold in stores. It has the same food value as fresh meat and is often used by restaurants. Frozen meat should be cooked as soon as it thaws and should not be refrozen.

Canned meat has been sealed in a metal tin and then heated. The heat cooks the meat and destroys bacteria. Meat is often canned with other ingredient – vegetables or gravy. Cured meat such as ham, bacon and sausage has been treated with smoke to prevent bacterial growth.

Curing and smoking processes were once used primarily to preserve meat and now are still important for long-term preservation. Packers cure most meat by pumping a curing into the arteries of the meat or by injecting the solution directly into the meat. The curing solution is made up of salt and water, but sugar may be included. Other ingredients such as sodium nitrate and sodium

ascorbate are usually added for the cherry-red colour of cured meat and to preserve the flavour.

Smoking produces the distinctive smoked-meat flavour which consumers demand in certain meats. Controlled amounts of smoke from special hard-wood sawdust are drawn into the rooms. The warm fragrant smoke gives the meat an unique flavour and colour.

The variety meats of cattle include the heart, liver, kidney, tongue, brain, ears, feet, lard, and etc.

I. Answer the following questions:

1. What forms of meat do you know?
2. What is fresh meat?
3. How can we keep meat from spoiling?
4. How is meat canned?
5. What does the heat do?
6. What cured meat do you know?
7. Why is meat cured?
8. What ingredients are usually added for the cherry-red colour of cured meat?
9. How is meat smoked?
10. What is variety meat?

II. Give Armenian equivalents for the following words and word combinations:

curing process, solution, ingredient, flavour, smoking process, to inject, cherry-red colour, to develop, consumers, sawdust, fragrant smoke, to demand, to seal, gravy, frozen meat, to spoil

III. Give English equivalents for the following words and word combinations:

հալեցնել, սոուս, խոզաճարպ, ուղեղ, երիկամ, պահածո, պատրաստել, բնորոշ, վաճառել, լյարդ, աճ, կարևոր, աղ, թարմ միս, շաքար, սառեցնել, բանջարեղեն

IV. Give synonyms and antonyms for the following words:

flavour, stores, to damage, meat, to preserve, amount, to add, important, heat, to destroy, primary, some, often, warm, quickly

V. Translate the following text and try to retell:

THE SPHINX

Have you ever seen a picture of a Sphinx? Do you know anything about the Sphinx?

She was the most famous riddle-maker in the world. Half-lion and half-woman, she never spoke; she only opened her mouth to ask the question: "What is the animal which walks on four legs in the morning, on two in the afternoon and on three at night?"

If a man could not guess the riddle, the Sphinx ate him alive.

One day a very clever man came her way. The Sphinx asked him the same question. She was already thinking of a fine dinner, when to her astonishment, he gave the right answer. "Man", he said, "when he is a child, he crawls on two feet. That is the morning of his life. When he becomes a man, he walks on two feet. That is the afternoon of his life. When he is old, he walks with the help of a stick, and that is the evening of his life."

The Sphinx was so angry when her riddle was guessed that she killed herself.

VI. Translate the following text:

Hot-dog

Most people know what "a hot dog" is. It is a sausage in a roll. But do you know why it is called a hot dog? Well, the long red sausage which goes into a hot dog is called a frankfurter; it got its name from the German town of Frankfurt. The sausages were very popular in the 1900s but hot frankfurters were difficult to sell in crowds. One man, Harry M. Stevens, had the job of feeding the crowds in baseball games. He had an idea! Why not to put the frankfurters in long, hot bread rolls? This made them easy to sell. Stevens added mustard and called them "red-hots".

The "red-hots" had a hot and spicy taste and became very popular. But, in 1903, an American cartoonist drew a long German sausage dog in place of the frankfurter. They were both long, so a frankfurter in a roll became known as a "hot-dog". It was a joke, but some people really thought the sausages contained dog meat! For a while, sales of hot dogs fell but not for long!

VII. Summarize the text.

Lesson 10

VOCABULARY

to slaughter	մորթել
storage	պահում, պահպանելը
to preserve	պահել, պահպանել
to dress	մսեղիքը մասերի բաժանել
to stun	շշմեցնել
unconscious	անգիտակեց, գիտակցութիւնը կորցրած
carcass	մսեղիք (մորթաց անասունի ամբողջ միսը)
to suspend	կախել
rail	կախիչ
hide	մորթ, կաշի
viscera	ընդերք, փորոտիք
to chill	խառել, սառցնել
flank	կող, կողք
loin	գոտկատեղ, սուկի (ոչխարի անոսկր միս)
sirloin	սուկի
brisket	կրծքի միս, լանջամիս
foreshank	առջևի սրունք
rib	կողոսկր
belly	փոր, ստամոքս

MEAT PACKING PROCESSES

Meat packing is the business of slaughtering cattle, hogs and sheep and preparing the meat for transportation and sale. In the old ages salted meat had been packed in wooden barrels. This method is used to preserve meat for storage or for shipment oversea. Now refrigeration, smoking, curing, canning are used to preserve meat.

Meat packing is the major industry in China, Brazil, France, Germany and the USA. Meat goes through more than 25 operations before it hangs dressed in packing-house coolers. Many packing plants slaughter and dress as many as 15 head of cattle or 600 to 1.200 hogs in an hour. They use mechanical stunners to make the cattle unconscious, then the animals are killed and dressed. The carcasses are suspended from an overhead rail for the dressing operation in which the hide and viscera are removed. Workers cut the dressed carcasses into halves, wash them and move them along the rail to refrigerated rooms. There it chills to about 35⁰ F. Then they are cut into flank, loin, sirloin, carcass, brisket, foreshank, rib.

Calves and lambs are made unconscious by an electric shock. Hogs are made by electric shock or gas. The next day they are cut into hams, shoulders, loins and bellies.

I. Answer the following questions:

1. What method was used in the old ages to preserve meat?
2. What methods are used now?
3. Which countries use meat packing?
4. How many operation does meat go through before it hangs dressed in packing-house coolers?
5. What are the carcasses cut into?
6. How are calves and lambs made unconscious?
7. How are hogs made unconscious?
8. What are calves, lambs and hogs cut into the next day after being made unconscious?

II. Give Armenian equivalents for the following words and word combinations:

to prepare, hog, salted meat, to preserve, lamb, shoulders, sheep, wooden barrels, cattle, storage, belly, to dress, hide, to move, industry.

III. Give English equivalents for the following words and word combinations:

կենդանի, կախիչ, պահպանել, մորթել, շշմեցնել, գիտակցութիւնը կորցրած, կրծքամիս, կող, սուկի, կախել, մսեղիք, զբաղվածութիւն, կողոսկր, փորոտիք

IV. Give synonyms and antonyms for the following words:

to go, big, many, to take, old ages, business, to put to death, old, short, next, to sell, to go, many, to give, to move

V. Put the verbs in brackets into the correct forms:

THE SEA ON STRIKE

Many years ago a London theatre (*to perform*) a play in which there (*to be*) a great storm on the sea. In those days the theatres (*to have*) no machines. That's why the manager (*to engage*) several boys to make the waves of the sea. They (*to jump*) up and down under a big piece of sea-green cloth. The "waves" (*to get*) a shilling a night for their work.

They (*to work*) for several weeks. But then the manager (*to decide*) to pay the less money – only a sixpence a night. So the boys (*to decide*) to go on strike. During the performance, when the storm (*to begin*) manager (*to lift*) one corner of the "sea" and said to the boys: "(*to make*) waves, boys! (*to make*) waves!"

"You (*to want*) waves for a shilling or for sixpence?" (*to ask*) a boy in a loud voice.

"Oh, for a shilling" (*to answer*) the manager.

The boys (*to begin*) to jump up and down again so well that the storm (*to look*) quite real.

VI. Translate the text:

WHEN ONLY HOLMES CAN HELP

If Sherlock Holmes were alive today, he would be more than 140 years old. You can say from the books about him. He would certainly no longer be living at 221 B Baker Street. He would have retired and lived in Sussex.

Yet letters addressed to him continue to arrive at Baker Street. Many people write to the great detective asking him for help. Sometimes there are such phrases in the letters: "The police can't do anything. Please, help." or "I ask you, please, hurry."

As there is no 221 B Baker Street, the postman brings them to number 221. They get not less than one letter a week. Some of those people who write,

especially from abroad, really believe that Holmes is a real person and lives at 221 B Baker Street. Many letters come from Europe. People sometimes ask Holmes for his autograph or photograph. Some letters are sent probably as a joke. But sometimes you can't be sure. One letter, for example, began: "Dear Mr. Holmes, I live in France and I cannot get my house (which is more than 2 mln) because of my guardians, who are trying to get it for themselves..."

The writer, who gives his name and address, describes how the house came into his family's hands. His letter ends: "My guardians are dangerous people. They can do anything to get the house. They are clever and only you can help. Hurry, before it is too late..."

Another letter, from an American girl ends: "I believe only you. Please help me."

Where it is clear that a person can be in real difficulties, he or she is advised to get in touch with a solicitor or the police. Where the writer really believes that Holmes personally will open their letter, he or she is told that such a person has never lived. These people are usually told, "We are sure you understand that Mr Holmes is no longer with us".

VII. Summarize the text.

UNIT 4

MILK AND DAIRY PRODUCT TECHNOLOGY CHILDREN'S NOURISHMENT



Lesson 1

VOCABULARY

nutrition	սնուցում, սնունդ, կերակրում
mammal (pl. mamalia)	կաթնասուն
dairy-farm	կաթնատնտեսական ֆերմա
malnutrition	վատ սնունդ, թերասնում
household	տնային տնտեսություն
livestock	ընտանի անասուններ
composition	բաղադրություն, միացություն
property	ունեցվածք
carefully	ուշադիր, զգույշ
unique	եզակի, միակ, նմանը չունեցող
constituent	բաղադրիչ մաս
appreciable	նկատելի, շոշափելի, գնահատելի
except	բացառել, բացառությամբ
overall	ընդհանուր, ամեն ինչը ընդգրկող
adequate	համապատասխան, ադեկվատ

Milk. Composition of Milk

Milk is a white liquid produced by the mammary glands of mammals. It is the primary source of nutrition for young mammals before they are able to digest other types of food. Early-lactation milk contains colostrum, which carries the mother's antibodies to the baby and can reduce the risk of many diseases in the baby. It also contains many other nutrients.

As an agricultural product, milk is extracted from mammals during or soon after pregnancy and used as food for humans. Worldwide, dairy farms produced about 730 million tones of milk in 2011, from 260 million dairy cows. India is the world's largest producer and consumer of milk, yet neither exports nor imports milk. New Zeland, the European Union's 28 member states, Australia, and the United States are the world's largest exporters of milk and

milk products. China and Russia are the world's largest importers of milk and milk products.

Throughout the world, there are more than 6 billion consumers of milk and milk products. Over 750 million people live within dairy farming households. Milk is a key contributor to improving nutrition and food security particularly in developing countries. Improvement in livestock and dairy technology offer significant promise in reducing poverty and malnutrition in the world.

The composition and properties of milk have been studied very carefully. It was early recognized that milk contains proteins, fat, sugar and minerals. With the vast development of chemistry in the last half of the 19th century, the constituents of milk were adequately characterized. By 1900 the overall picture of the composition of milk was rather well sketched in. At that time it was recognized that several different proteins are present in milk, that milk fat is unique in composition, that milk sugar (lactose) is composed of two simpler sugars, glucose, and galactose, and that the milk salts consists of sodium, potassium, calcium, magnesium, phosphate, citrate, chloride and bicarbonate.

The principle group of new constituents that has been discovered in milk since 1900 is the **vitamins: milk contains appreciable amounts of all the known vitamins except vitamin K.**

I. Answer the questions:

1. What is milk?
2. What does milk contain?
3. What constituents are there in milk?
4. What country is the world's largest producer and consumer of milk?
5. What does milk sugar consist of?
6. What was discovered in 1900?
7. How many consumers of milk are there throughout the world?

II. Give Armenian equivalents:

composition, property, carefully, recognize, contain, protein, unique, compose, consist of, principle, constituents, discover, appreciable, amount, known, except, overall, vast, to be sketched in, development

III. Translate the following text:

Classification and Filtration of Milk

In order to remove more of the dirt from milk than can be done by strainers, one of two processes – clarification or filtration – is resorted to by milk plants.

Clarification consists of passing milk through a centrifuge, known as a clarifier, that resembles a cream separator. It differs from the separator in that there is but one exit, where the cream and milk are thoroughly mixed. The bowl of the clarifier also has a greater capacity for holding dirt than has the bowl of the separator. In clarification the material with a higher specific gravity than the milk serum is thrown out and collected in the clarifier bowl. This material is like separator slime in all respects. Clarified milk does not keep any better than non-clarified milk. While many bacteria are removed in the slime, other colonies are broken up so as not to reduce the bacterial count by the culture method. Many milk plants use filters instead of clarifiers to remove the visible dirt from market milk. The filter consists of a fine meshed material fixed in a mechanical device so that the milk is forced through by pressure. All the coarser particles are filtered out regardless of the specific gravity. The leucocytes and cell debris that are centrifuged out by the clarifier are not removed by the milk filter.

IV. Give Armenian equivalents:

clarification, filtration, resort to, plant, specific, gravity, resemble, separator, exit, thoroughly, capacity, serum, slime, remove, reduce, instead of, visible, force, pressure, coarse, particle, regardless, cell.

V. Fill in the blanks with prepositions *in, of, with, upon, at, by, in, into*:

Cooling Milk or Cream.

_____ the production _____ milk or cream there is no more important factor than that _____ prompt and adequate cooling. The rate _____ which bacteria multiply is dependent _____ the temperature _____ milk or cream.

To avoid rapid bacterial growth and resulting deterioration _____ of milk or cream, these products should be promptly cooled to 50°F or lower and kept _____ that temperature. Milk or cream may be cooled _____ running water, _____ setting it _____ cold water, _____ immersing it _____ the milk coils in which cold water circulates, or _____ by placing it _____ in a chamber or cabinet where the air is cooled.

Milk and cream are most commonly cooled _____ in cans placed in tanks of cold water which may be cooled _____ ice or artificial refrigeration. The most economical cooling is done where water of 50⁰F or below can flow continuously through the cooling tank.

Milk or cream is not cooled so rapidly _____ this method as _____ the surface coolers; but if cold water is passed through the cooling tank, this method is satisfactory. A number _____ mechanical devices have been developed to stir the milk or cream while cooling. These devices speed up the cooling process, as milk that is stirred cools more rapidly than milk that is not stirred.

Cooling _____ cold air chambers is increasing in popularity. Air is not so efficient as water in cooling, unless it is rapidly circulated; cold air chambers, particularly the “walk in” type, are more convenient.

VI. a) Give the antonyms:

careful, more, different, great, high, to keep, better, to break, simple, exit, rapid, to reduce

b) Give the synonyms:

prompt, to study, property, composition, amount, to keep, to reduce, exit, high, to break

VII. Summarize the text.

Lesson 2

VOCABULARY

valuable	արժեքավոր, էական նշանակություն ունեցող
concentration	թանձրացում, խտացում
changeable	փոփոխական
chilly	սառեցնող, սառը
nutritional	սննդարար
to emphasize	ընդգծել
to define	տարբերակել
measurement	չափ, չափելը, չափում
requirement	պահանջ, պահանջմունք, կարիք
consumer	սպառող
customer	հաճախորդ
to ripen	հասունանալ, հասնել
refrigeration	սառեցում, պաղեցում

Butter

Butter is recognized as one of the finest and most valuable of the processed milk products. Butter is, of course, a concentration of milk fats. Butter contains about 20 times as much fat as the milk itself. It is generally used as a spread and, as well as in cooking, such as baking, sauce making, and plan frying. Butter consists of butter fat, milk proteins and water. Most frequently made from cows' milk, butter can also be manufactured from the milk of other mammals, including sheep, goats, buffalo, and yaks. Butter is a water-in-oil emulsion resulting from an inversion of the cream, an oil-in water emulsion. Butter remains a solid when refrigerated, but softens to a spreadable consistency at room temperature, and melts to a thin liquid consistency at 32-35⁰ C (90-95⁰F). It generally has a pale yellow colour, but varies from deep yellow to nearly white. Its unmodified colour is dependent on the animals' feed and is commonly manipulated with food colourings in the commercial manufacturing process, most commonly carotene.

In the changeable and often chilly Danish climate, its high calorific value creates a great demand for butter. It is also has a high biological standard and nutritional experts emphasize that the valuable vitamins found in milk fat are retained in butter. Then there is the aroma, the fine flavour. In Denmark various kinds of butter are made with different flavours and with the special merits of good butter.

It is extremely difficult, if not impossible, to define flavour or aroma. They cannot be set down in black and white in terms of statistics, chemical analysis or physical measurements. Flavour can be registered only by the human organs of taste, and although these are highly developed in most people, daily habits are the dominant factor.

To satisfy the very varied requirements of consumers, the Danish dairy industry tries to produce the various types of butter required by its customers in the export market. The keeping qualities of butter vary with the different types. With ripened cream butter, the unsalted butter keeps better than the salted. The sweet cream butter, on the other hand, will keep for a very long time even when it contains a fairly large mixture of salt. It is, of course, best to keep butter under controlled refrigeration if it is to be kept for a long time before passing into the hands of the consumer.

I. Answer the questions:

1. What is butter?
2. What is butter made of?
3. What does butter consist of?
4. Why is it extremely difficult to define flavour or aroma?
5. What does Danish dairy industry do to satisfy the very varied requirements of consumers?
6. What types of butter do you know?

II. Give Armenian equivalents:

butter, to define, nutritional, changeable, valuable vitamins, concentration, measurement, consumer, customer, type, refrigeration, Danish climate, concentration, demand, biological standards, different flavours, habits, requirements, mixture

III. Fill in the gaps using the correct form of the verb given in brackets:

A Brief History of Butter and Cheese

Butter and cheese _____ (*to be made*) and _____ (*to be used*) since the earliest times. People living on the Iranian plateaus some 5000 years ago _____ (*to be known*) to have kept domestic cattle and to have used the milk from these animals for making butter and cheese. But they _____ (*to connect*) it with religious activities. Cows _____ (*to be considered*) holy animals by the Sumerians and by the ancient Egyptians; they _____ (*to be*) to this day regarded as sacred by the Hindus. However this has not prevented man from taking practical advantage of these products. Butter _____ (*to be used*) as a food in India as much as 4000 years ago. Very often butter _____ (*to be used*) as a cosmetic, medicine, lubricant. Arabia _____ (*to be believed*) to be the birth place of cheese-making. The world's first cheese might have been manufactured, quite by chance when a combination of natural phenomena resulted in coagulating the gluten of milk into a semi-solid form. Now cheese _____ (*to be*) a food of highly concentrated nature, nourishing, delicious and varied in flavour and texture.

IV. Give Armenian equivalents:

butter, cheese, domestic cattle, Egyptians, cosmetic, lubricant, medicine, birth place, cheese-making, food, flavour, texture, to make, to be known, to connect, to be considered, to believe, to manufacture, to be regarded, to take advantage, religious activities, holy, ancient, nourishing, delicious, by chance

V. a) Give the synonyms:

to make, medicine, flavour, chance, to use, to consider, ancient, to manufacture, various, difficult, type

b) Give the antonyms:

to find, various, special, difficult, domestic, birth, ancient, often, high, chemical, impossible

VI. Translate the following text:

Condensed Milk

Condensed milk is cow's milk from which water has been removed. It is most often found in the form of sweetened condensed milk, with sugar added, and the two terms "condensed milk" and "sweetened condensed milk" are often used synonymously today. Sweetened condensed milk is a very thick, sweet product which when canned can last for years without refrigeration is unopened. Unsweetened condensed milk products spoil more easily and are now uncommon. Condensed milk is used in numerous dessert dishes in many countries.

Condensed milk has many uses. In the food industries this product is used extensively in ice-cream factories, in bakeries, in the manufacture of confectionery. Sweetened condensed milk differs from unsweetened evaporated milk in that the former has 15 to 18% of sugar added in the processing, which results in a final product containing some 40 per cent of sugar. The sweetened milk is usually pasteurized in order to kill many of the bacteria present and inactivate the enzymes of milk, which may cause undesirable chemical and physical changes. The condensed milk may be packed in bulk or in cans.

VII. Summarize the text.

Lesson 3

VOCABULARY

century	դար
peasant	գյուղացի
churn	խնոցի հարել, թափ տալով խառնել, խնոցի
storage	պահում, սառնարանում պահելը՝ պահպանումը
industry	արդյունաբերություն
vessel	անոթ
faucet	ջրի ծորակ
exhaustive	ուժասպառ անող, հյուժիչ
yield	արտադրողականություն
to mention	հիշատակել
to knead	հունցել, խառնել
non-rustling	չժանգոտող
to skim	քաշել (սերուցքը)

Butter Making.

Here is how butter was made in 15th century. A peasant allowed the milk to stand for some time, skimmed off the cream with spoon and churned it to butter in a butter churn. The worked butter was eaten fresh or salted for storage. A similar method was in use in Holland in 1660.

The development of the modern butter-making industry dates from the 18th century when the shallow-pan system was replaced by the deep-pan system in which the cream was allowed to rise in the milk in the deep vessel and the skim milk was run off through a faucet at the bottom. The new system shortened the time of setting, permitted more exhaustive skimming, yielded cream of the better quality and it was the beginning of the factory system of butter making.

It may be mentioned here that churning-kneading machines without rollers soon have made their appearance. Although non-rustling steel construction is to be preferred, these churning-kneading machines are also selected in a wooden construction on account of the lower cost.

I. Answer the questions:

1. What century does the development of butter-making industry date from?
2. How was butter made in the 15th century?
3. When and where was similar method in use?
4. What method was shallow-pan system replaced by?
5. What did the new system do?
6. What kind of machines soon appeared?
7. Why are churning-kneading machines selected?

II. Give Armenian equivalents:

peasant, to allow, to skim off, to churn, storage, shallow-pan, deep-pan, vessel, faucet, permit, exhaustive, yield, to mention, roller, appearance, non-rustling, steel, to prefer, wooden, on account, cost

III. Translate the following text and remember the explanations:

Kinds and Grades of Butter.

All butter may be divided into two general groups depending upon whether the cream from which it is made is raw or pasteurized. All butter may also be divided into salted or unsalted groups. In addition to these there are a number of other classifications of butter that are used in the trade. They are:

- Creamery butter*: The butter made in any creamery or plant where butter is churned.
- Farm butter or dairy butter*: Butter made on the farm where the cream is produced.
- Ripened cream butter*: The butter made from cream that has been ripened by the addition of a starter.
- Sweet cream butter*: Butter made from cream containing not more than 0.2 per cent acid at any time.
- Whey butter or whey cream butter*: The butter made from cream skimmed from whey. It may be either sweet or cultured. Renovated or process butter. The butter made from refined and reworked butter of inferior quality, usually packing stock.
- Packing stock*: The butter unsuited for human consumption.

In the addition to the above classes butter is also sold under definite market grades based upon quality.

IV. Fill in the blanks with prepositions: by, with, of, from, to, under, on,

Sour cream

Sour cream is a dairy product obtained ____ fermenting a regular cream ____ certain kinds ____ lactic acid bacteria. The bacterial culture, which is introduced either deliberately or naturally, sours and thickens the cream. Its name stems ____ the production ____ lactic acid by bacterial fermentation, which is called souring. The taste ____ of sour cream is only mildly sour.

Sour cream, made out ____ cream, contains ____ 18 ____ 20 per cent butter fat – about 22 grams per 4 fluid ounce serving – and gets its characteristic tang from the lactic acid created ____ the bacteria. Commercially produced sour cream often contains additional thickening agents such as gelatin, as well as acids to artificially sour the product.

Light, or reduced fat, sour cream contains about 40 per cent less butter fat than regular sour cream because it is made from a mixture ____ milk and cream rather than just cream. Fat free sour cream contains no cream at all, and is made primarily from non-fat milk, modified corn starch, thickeners, and flavouring agents.

Sour cream is not fully fermented, and as such must be stored ____ refrigeration. As with other dairy products, it is usually sold ____ with an expiration date stamped ____ the container, though whether this is a “sell by”, a “best by” or a “use by” date varies with local regulation.

V. Fill in the gaps using the correct form of the verb given in brackets:

Cream for Butter Making.

There _____ (to be) four processes to which cream may _____ (to be submitted), with which students of dairying should be acquainted. There _____ (to be) pasteurization, neutralization, ripening and treatment to free from odours and flavours.

Most of the cream used for churning in plants _____ (to be pasteurized). Either the holding of flash systems of pasteurization or a combination of the two may _____ (to be used).

Before sour cream _____ (to be pasteurized) it should be neutralized to avoid curdling. When the cream has curdled, some of the curd particles _____ (to be incorporated) in the butter. Other curd particles _____ (to enclose) fat particles and _____ (to cause) high fat losses in the butter milk.

Ripening of cream refers to the process of lactic acid fermentation started by the addition of lactic acid cultures. Ripening _____ (to be carried)

out by cooling the cream following pasteurization from 70⁰ to 72⁰ F, until an acidity of 0.3 to 0.4 per cent _____ (to be formed), when it _____ (to be cooled) preparatory to churning.

The starters _____ (to consist) of two types of organism developed in milk. One type of organism _____ (to break) the lactose down into lactic acid and the other _____ (to act) upon other compounds of the cream to form a series of volatile compounds, of which deacetyl _____ (to be) an example. These compounds _____ (to give) to the cream and butter some of the desirable flavours and aromas.

VI. a) Give the antonyms:

here, to stand, fresh, similar, to rise, to add, cool, to give, natural, often, less, regular, to sell

b) Give the synonyms:

to make, a peasant, to allow, to eat, similar, to rise, new, to begin, to select, cost, flavour, odour, type, to divide,

VII. Summarize the text.

Lesson 4

VOCABULARY

originally	սկզբնապես, ի ծնե, ծագումով
goat	այծ
supplier	մատակարարող
pioneer	առաջին նորաբնակ, նախածեռնող
management	կառավարում
knowledge	գիտելիք
ability	ընդունակություն, կարողություն
move	շարժվել
condition	պայման
invariability	անփոփոխություն, մշտականություն
circumstance	հանգամանք, դեպք, պարագա
therefore	ուստի, հետևաբար, հետևապես
purpose	նպատակ
wrapping	փաթեթավորում
source	աղբյուր

From the History of Cheese.

Cheese is a food derived from milk that is produced in a wide range of flavours, textures, and forms by coagulation of the milk protein casein. It comprises proteins and fat from milk, usually the milk of cows, buffalo, goats, or sheep. During production, the milk is usually acidified, and adding the enzyme rennet causes coagulation. The solids are separated and pressed into final form. Some cheeses have molds on the rind of throughout. Most cheeses melt at cooking temperature.

Cheese has been made in Denmark for several hundred years, originally from the milk of goats as well as cows, but gradually the cows became almost the sole suppliers. During the Middle Ages cheese was a speciality, a sort of dessert, an attractive finish to a meal, but nothing more.

The person who was probably most responsible for the development and improvement of Danish cheese-making, however, was a Danish farmer's wife, Mrs. Hanne Nielsen, from Havarti Farm near Copenhagen. The Danish Havarti is rightly called after this pioneer. She was born in 1829. As a young wife at Havarti she took over the management of the farm dairy, renting it from her husband and running it on her own account. Although she had an indifferent knowledge of foreign languages, Hanne Nielsen had an amazing ability to gather information about cheese-making in foreign countries. She travelled all over Europe learning about cheese-making and when she returned home she started experiments at Havarti Farm. This ordinary – and yet extraordinary – farmer's wife brought back to Denmark goat's milk cheese from Norway and Cheddar cheese from England.

I. Answer the questions:

1. What is cheese?
2. What does cheese comprise?
3. Who was the pioneer in the development and improvement of cheese-making?
4. What milk has cheese been made from in Denmark for several hundred years?
5. When did she start her experiments?
6. What did Hanne Nielsen do for cheese-making in Denmark?
7. What was discovered in 1900?

II. Give Armenian equivalents:

goat, cow, sole supplier, attractive, dessert, meal, responsible, improvement, management, to rent, account, knowledge, amazing, ability, comprise, consumption, originally, move, condition, invariably, circumstances, suitable, purpose, source

III. Translate the following text:

Cheese-making

Until modern times cheese-making was carried out on the farm and it is only recently that cheese-making has moved to factories. Cheese-making is easily controlled under factory conditions, and undoubtedly it will gradually become more as a factory process. Experience has shown that the best cheese is made from milk produced when cows are grazing during the summer. Thus invariably cheese-making is found mainly on grassland dairy farms and where

the cows are calving in the spring. Under these circumstances, the cost of production is cheaper and therefore is suitable for manufacturing purposes where the value is less than that of liquid milk. This means that in Great Britain the cheese-making industry has been developed in the grassland countries of the Midlands and the west of England and Scotland. It is in these same districts that the cheese factories have appeared, but with modern means of transporting milk easily some factories have been built outside the grassland districts.

Two other developments which have taken place at factories have been blending of cheeses and the wrapping of cheese into packets. The blending consisted of mixing cheeses from different sources, shredding them or pressing back into cheese and wrapping them for sale. The wrapping of cheese is a factory process, it being impossible for this to be done on a farm.

IV. Give Armenian equivalents:

to carry out, cheese-making, common, factory process, experience, to graze, invariably, grassland, dairy farm, to calve, circumstances, cost, suitable, purpose, modern means of transporting, milk, blending, wrapping, source, shredding

V. Fill in the blanks with prepositions *from, for, of*:

Products from which cheese is made.

Cheese may be made ____ whole milk, skim milk, cream or whey. Whole milk is by far the more important, as Cheddar cheese, Swiss, Idmburger, Roquefort, etc are all made ____ whole milk. Skim milk, used principally ____ the making ____ cottage cheese, is also used ____ the making ____ certain "skim milk" Cheddar cheeses.

Cow's milk is the product most extensively used ____ cheese making; next is goat and sheep milk, which are used extensively in Europe ____ the production of certain types ____ cheese. Roquefort cheese is made ____ sheep's milk.

Cheese making requires milk ____ high quality ____ the standpoint ____ flavour and its microorganism content. The flavours ____ milk are carried over into the cheese. Bad feed flavours ____ the milk may practically ruin cheese. Undesirable microorganism ____ the milk, including bacteria yeasts, and molds, will produce undesirable effects upon the cheese during ripening.

VI. a) Give the antonyms:

near, to start, modern, to carry, to move, cheap, to appear, to built, outside

b) Give the synonyms:

several, a sort, a person, to call, to gather, a country, an experiment, meal, to rent, suitable, factory, common, cost, manufacturing, a purpose, to learn

VIII. Summarize the text.

Lesson 5

VOCABULARY

whole	ամբողջ, լրիվ
whey	շիճուկ
cottage	խրճիթ, տնակ, կոտեջ
extensively	ընդարձակ, լայնատարած
ruin	կործանում, սննկացում, փլուզում
undesirable	անցանկալի, տհաճ, անբարենպաստ
yeast	թթխմոր, մակարդ, խմորիչ

Cheese. Types of cheese.

Cheese making, as well as butter making, is one of the earliest arts connected with dairying. The time when cheese was first made antedates the earliest the earliest of human records. The first cheese made probably the result of natural souring; this was followed by cheese made from rennin, coagulation of milk, and ripening. While cheese making is still an art, science plays an important part in the making and curing of cheese. Modern cheese making draws upon chemistry and bacteriology for the control of the entire process, beginning with the milk including all the steps in the making and curing of cheese.

Cheese differs markedly from butter in its composition, structure, and the chemical parts of the milk that are used. The processes involved in the manufacture of cheese are unlike those involved in butter making and the processes for the manufacture of the different cheeses also vary greatly.

The several hundred of cheese may be divided into different classes or groups. There are different bases used for such a classification. One uses the hardness of the finished cheeses as a basis for division, while another uses the condition or character of the milk or product from which the cheese is made as basis for classification.

On the basis of the hardness the cheese fall into the following groups, with the subdivision based upon the methods used in making and the organism employed:

- I. Soft cheese:
 1. Unripened-cottage and cream cheeses.

2. Ripened by bacteria – Limburger.
3. Ripened by molds – Camembert.
- II. Semi-hard cheese:
 1. Ripened by bacteria – brick.
 2. Ripened by molds – Roquefort.
- III. Hard cheese
 1. Without gas holes – Cheddar.
 2. With gas holes – Emmenthal of Swiss.
- IV. Processed or reworked.

On the basis of the product used, cheese may be classified into the following group:

- I. Rennet or sweet milk cheese
 1. Soft cheese
 - a) Ripened by bacteria.
 - b) Ripened by molds.
 2. Hard cheese
 - a) With gas holes
 - b) Without gas holes
- II. Sour milk cheese.
- III. Whey cheese.
- IV. Process cheese.

In the United States the principal cheeses made are those of the hard variety – Cheddar and Swiss cheese. Among the soft cheeses the unripened varieties, cottage cheese and cream cheese constitute the principal ones. The manufacture of the other types of cheese is not extensive, although practically all types are now manufactured in this country.

I. Answer the questions:

1. How was first cheese made?
2. What does modern cheese making draw upon?
3. What is the difference between cheese and butter?
4. What types of cheese do you know?
5. Which are the bases for division and classification of cheese?
6. What groups of cheese do you know on the basis of hardness?
7. What groups may be cheese classified on the basis of product used?

II. Give Armenian equivalents:

whey, cottage cheese, whole milk, extensively, standpoint, content, to ruin, bacteria, yeasts, molds, classification, division, hardness, ripened cheese, unripened, composition, structure, subdivision, principal

III. Translate the following text:

Danish Cheese.

The Danish Cheeses are the following:

Samsøe:

A round, flat cheese with sharply turned edges. It weighs about 14 kgs. Its diameter is about 17 inches, its height is about 4 inches. Fat content is 45% or 30%. It is hard cheese, firm in texture but yielding in consistency, light yellow in colour and with large holes regularly distributed. Its flavour is characterized by its nutty aroma. A fresh Samsøe, from 8 to 10 weeks old, is mild in flavour, but many people prefer Samsøe that is six months old and stronger in flavour.

Dambo:

A flat, square cheese, which weighs about 6 kgs. It is obtained with or without caraway seeds. Length and breadth are about 10 inches, height is about 3 inches. Fat content is 45%, 30% or 20%. In colour and texture it reminds the Samsøe cheese. The holes are round, the cheese-mass is yellow and of an elastic consistency. It is an "Economical" cheese which cuts well. It is steadily becoming more and more popular in the export market.

Havarti:

This is the cheese that is called after the pioneer, Mrs. Hanne Nielsen of the farm called Havarti. It weighs about 4-4.5 kgs, its diameter is about 10 inches, height about 4 inches, length about 12 inches, its fat content is 30%, 45%, and 50%. It is also made in a cylindrical shape. Havarti is a half-firm cheese. Its cut surface is yellow, with numerous, irregular holes, both large and small. It is packed in silver foil. Havarti has a fine, slightly acid flavour. As it grows older it becomes sharp. In recent years Havarti has become the Danish cheese in greatest demand in the export market.

Danish blue:

The Danish speciality is a veined cheese with an international reputation for piquant flavour. Its weight is about 2-3 kgs. Its fat content is 50% and more. It ripens quickly and is whiter than any of the other cheeses. The flavour is sharp but clean. The greenish-blue veins are an organism which belongs to the same family as that used in making penicillin. It is said that those who work at the Danish Blue dairies never catch colds. Danish Blue is sold as whole cheeses or in triangular portions in silver foil, weighing either 2 oz or 4 oz.

IV. Fill in the blanks with prepositions *to, in, of, for, from, by*:

Milk Product Factories.

Mention should be given _____ the establishment _____ recent years _____ various entirely new plants _____ the preparation _____ milk powder _____ the atomizer process. These factories process _____ 3000 to 10000 kg of milk per hour and are furnished with stainless steel vacuum evaporators working on the two-stage system, the atomizer towers being also _____ metal construction.

It may be assumed that the concrete construction _____ these towers being also _____ metal construction.

It may be assumed that the concrete construction _____ these towers has completely disappeared.

Finally we would mention the fact that much greater attention is no being devoted _____ the manufacture _____ ice cream. Efforts are being made to raise the quality _____ ice cream _____ the establishment _____ central ice cream factories and the encouragement _____ trade training _____ this branch _____ the dairy industry.

Some years ago processing _____ whey was a problem especially when the surplus was more than the farmers wished to take _____ return.

Various factories have now acquired plants _____ the processing _____ whey to whey paste or whey powder. In these plants use is made of modern evaporators, roller driers or spray driers.

V. Fill in the gaps using the correct form of the verb given in brackets:

Yogurt

Yogurt _____ (to be) a fermented milk product produced by bacterial fermentation of milk. The bacteria used to make yogurt _____ (to be known) as "yogurt cultures". Fermentation of lactose by these bacteria _____ (to produce) lactic acid, which _____ (to acts) on milk protein to give yogurt its texture and its characteristic tang.

In Western culture, the milk _____ (to be heated) first to about 80°C to kill any undesirable bacteria. In some places, such as parts of India, curds _____ (to be) a desired component and milk _____ (to be not pasteurized) but boiled. The milk _____ (to be cooled) then to about 45°C. The bacterial culture _____ (to be added), and the temperature _____ (to be maintained) for 4 to 7 hours to allow fermentation.

Isaac Carasso _____ (to industrialize) the production of yogurt. In 1919, Carasso, who _____ (to be) from Ottoman Salonika, _____ (to start) a small yogurt business in Barcelona, Spain, and _____ (to name) the

business Danone (little Daniel), after his son. The brand later _____ (to expand) to the United States under an Americanized version of the name: Dannon. Yogurt with added fruit jam _____ (to be patented) in 1933 by the Radlická Mlékárna dairy in Prague.

VI. a) Give the antonyms:

sweet, to connect, to begin, quick, clean, early, modern, flat, hard, old, strong, to cool, bottom, visible

b) Give the synonyms:

to connect, follow, to make, to begin, to include, to manufacture, great, group, principal, quick, clean, entire

VII. Summarize the text.

Lesson 6

VOCABULARY

to consume	սպառել, օգտագործել
to contain	պարունակել
Beverage	ըմպելիք
ingredient	բաղադրամաս
flavour	բույր
nutrition	սնունդ
benefit	օգուտ
infant	մանուկ
appropriate	համապատասխան
encourage	խրախուսել
to decay	փտել, քայքայել
diarrhea	փորլուծություն
intestinal	աղիքային
obesity	զիռություն
discomfort	անհանգստություն
fiber	մանրաթել
pulp	միջուկ
carbohydrate	ածխաջրածին
potassium	կալիում
fluoride	ֆլուորիդ
cholesterol	քոլեստերոլ

FRUIT JUICE AND CHILDREN

It is true that fruit juice can be a healthy, natural source of vitamins and minerals, but parents should also know about the negative effects of consuming too much fruit juice.

For a product to be called “fruit juice”, the law says it must contain 100% fruit juice. If the product contains anything less than 100% fruit juice, a term such as “drink”, “beverage”, or “cocktail” must be used. These types of products may contain anywhere between 10% and 99% juice. The other ingredients may be just added sweeteners or flavourings. That is why it is important to read the label – to find out exactly what’s in the product you are buying.

Fruit juice offers no nutritional benefit for infants younger than 6 months. It may even cause health risks for your baby. Fruit juice can be a healthy part of an older child’s diet, but it should be consumed in the appropriate amounts.

Buy only 100% fruit juice! Fruit drinks do not offer the same nutritional benefits. Encourage your child to eat whole fruits. Fruit juice should provide no more than ½ of the daily recommended fruit servings.

Drinking too much fruit juice can cause dental decay, diarrhea, and intestinal discomfort in children. Extremely high consumption of fruit juice causes obesity in children.

A glass of juice equals one fruit serving, but fruit juice offers no advantages over whole fruit. Fruit juice also lacks the fiber found in whole fruit.

Children 1 to 4 years old should have 2 fruit servings. Older children should consume up to 4 fruit servings per day. Half of these servings can be in the form of fruit juice (not fruit drinks).

* What’s in it?

- Water
- Simple carbohydrates (sugar)
- Small amounts of proteins and minerals
- May contain high amounts of vitamin C or A, and the minerals potassium and calcium
- May contain fluoride

* What’s not?

- Cholesterol
- Fat
- Fiber (unless pulp is added)

I. Answer the questions:

1. What natural sources of vitamins and minerals do you know?
2. What does the law say about “fruit juice”?
3. What can drinking too much fruit juice cause?
4. What are the main constituents of juice?
5. Why is it important to read the label?
6. How much juice do other types of product as “drink”, “beverage” or cocktail contain?
7. What does a glass of juice equal?
8. How many servings should children 1 to 4 years old have?
9. How many servings should older children consume?
10. How much of the daily recommended fruit servings should fruit juice provide?

II. Find English equivalents for the following in the text:

վիտամինների և հանքային նյութերի բնական աղբյուր; ճիշտ է; բացասական ազդեցություն; այն պետք է պարունակի; այլ բաղադրամասեր; ահա թե ինչու; մրգահյութը կարող է լինել օգտակար; ապրանքների այս տեսակները; կարևոր է; համապատասխան քանակությամբ; աղիքային անհանգստություն; մրգահյութի; չափազանց բարձր սպառում; երեխայի սնունդը; ատամնային քայքայում (ատամի):

III. a. Choose the correct words in the following sentences:

1. For a (*product/meals*) to be called “fruit juice” the law says it must contain 100% fruit juice. 2. These types of products may (*contain/consist of*) anywhere between 10% and 99% juice. 3. That’s why is important to read the (*label/note*) to find out exactly what’s in the product you are buying. 4. Fruit juice (*offers/suggests*) no nutritional benefit for infants younger than 6 months. 5. Extremely (*high/tall*) consumption of fruit juice causes obesity in children.

b. Which of the following statements can be completed correctly with *vice versa*:

1. Parents usually love their children and _____.
2. Cats eat mice and _____.

3. Children like to watch TV and _____.
4. Children enjoy playing with dogs and _____.

IV. Choose the correct form of the verbs in the brackets:

SYMBOLS OF AMERICA

The American flag (to be) often called “The Stars and Stripes”. There (to be) three colours on the flag of the United States – red, white, and blue. As there (to be) fifty states in the United States, there (to be) fifty stars on the American flag: one star for each state.

The American flag (to have) thirteen stripes. The stripes (to be) red and white. The flag (to have) seven red stripes and six white stripes. There (to be) one stripe for each of the first thirteen colonies of the United States.

One of the most famous symbols of the USA (to be) the Statue of Liberty. France (to give) the statue to America in 1884 as a symbol of friendship. The Statue (to be) in New York on Liberty Island.

V. Homonyms are words that sound the same but have different meanings and spellings. In the following sentences, circle the correct homonyms.

1. Americans like to eat (they’re; their) lunches quickly because (they’re; their) often in a hurry. 2. Let’s (by; buy) some (meat; meet) and then (meat; meet) (by; buy) the cashier. 3. I want (to; too) have (some; sum) coffee. 4. Every (Sunday; sundae) I eat a chocolate (Sunday; sundae). 5. Cooking styles (vary; very) a great deal in all the world, so eating in different styles is (vary; very) interesting. 6. It’s (to; too) late for breakfast and (to; too) early for lunch, so let’s go (to; too) a restaurant and have some tea of coffee.

VI. Match the given words with the corresponding definitions:

consume, label, beverage, product

1. Article of trade or commerce: wares, merchandise, goods, commodities
2. Liquid for drinking; juice, lemonade
3. Strip of paper for attaching to objects and bearing description of a product
4. Use, eat or drink up

VII. Summarize the text.

Lesson 7

VOCABULARY

to afford	թույլ տալ
delicious	շատ համեղ
occasion	դեպք
health	առողջություն
to provide	ապահովել
proper	ճիշտ
choice	ընտրություն
trap	թակարդ
to replace	փոխարինել
to advertise	հայտարարություն տալ
baked	խորոված, տապակած
instead of	փոխարեն
breaded	ալրի կամ պաքսիմատի մեջ թավալած
to focus	կենտրոնանալ

EATING FAST, EATING SENSIBLY. CHILDREN AND FAST FOOD.

Fast food is a part of our culture and busy lifestyle. It is convenient, affordable, and even if we sometimes don't want to admit it, delicious!

You must think that the words “fast food“ and “nutrition” don't belong in the same sentence, but fast foods can be a source of good nutrition if you know how to make proper choices. Fast food is cheaper than eating out at other restaurants, although it often costs more than home-prepared meals.

However, it is easy to fall into trap of eating too much fast food. If you find yourself eating fast food more than one to two times per week, you may wish to focus more on healthy menu choices.

Nutrition experts say that there is nothing wrong with children eating an occasional fast food meal as long as less nutritious foods aren't regularly

replacing healthy ones. Most children love fast foods and much of the industry's advertising is directly aimed at them. Parents should explain that businesses advertise to sell their products, not to promote good nutrition. Teach your children that, when it is eaten from time to time, fast food has a place in a healthy diet, but also that a variety of different foods are needed to feel healthy.

Many fast foods are high in fat, sodium, and calories and relatively low in carbohydrate, micronutrients, and fiber. Coated or deep-fried foods will often be high in fat. Grilled or baked food is better.

Perhaps the best thing you can do to provide your body with proper nutrition is to eat more vegetables.

I. Answer the questions:

1. What is "fast food"?
2. Do you like fast food?
3. What fast food do you know in Armenia?
4. What fast food (snack bars) do you go with your friends?
5. Which is cheaper, fast food or eating out at restaurants?
6. How can fast food be a source of good nutrition?
7. Do you have any ideas about healthy diet?
8. What are fast foods high in?
9. What are fast foods low in?
10. How can you provide your body with proper nutrition?

II. Find English equivalents for the following in the text:

արագ սնունդ, մեր նշակութի մի մաս, ընդունել, շատ համեղ, լավ սնունդի աղբյուր, ավելի էժան քան, այլ ռեստորաններում, կատարել ճիշտ ընտրություն, այնուամենայնիվ, ընկնել թակարդը, շաբաթական երկու անգամ, կենտրոնանալ, արդյունաբերության գովազդը ուղղված է, անմիջապես, վաճառել իրենց ապրանքը, ժամանակ առ ժամանակ, առողջ սնունդ, տապակած հավ

III. a. Write the comparative of the following adjectives:

fast, easy, much, long, many, good, high, low, delicious, bad

b. Translate the text:

LESS COFFEE, FEWER HEART ATTACKS

A person drinking coffee five or more cups a day has more than twice the risk of having heart problems than one who drinks no coffee at all.

Over 1.000 men were surveyed at five-year intervals for up to 25 years on their coffee use. One major finding was that even when other factors – smoking, blood pressure, cholesterol level, and age – are taken into account, there is still a greater risk of heart trouble among coffee drinkers.

In order to lessen that risk, doctors advise that coffee drinkers besides quitting smoking and having their cholesterol levels checked, should be prudent in their coffee intake.

IV. Complete the sentences with a preposition *on, in, of, with, at, about*

1. Fast food is a part ... our culture and our busy lifestyle. 2. Fast food is cheaper than eating out ... other restaurant. 3. You may wish to focus more ... healthy menu choices. 4. Many fast foods are high ... fat, sodium, and low ... carbohydrate, micronutrients and fiber. 5. The best thing you can do to provide your body ... nutrition is to eat more vegetables. 6. Look ... the menu and think ... the healthy decisions you could make to improve your diet.

V. Quickly look through the list and choose the right meaning

advantage – (i) a favourable point, (ii) a necessary condition, (iii) an essential feature

reduce – (i) make more, (ii) make impossible, (iii) make less

depend on – (i) be unable to do without, (ii) be controlled by, (iii) deal with

consist of – (i) be made up of, (ii) comprise, (iii) arrange in a certain manner

require – (i) need, (ii) regulate, (iii) command

VI. Paraphrase the following sentences according to the model:

It was so tasty. – It was such a tasty soup.

1. It was so cheap. 2. It is so delicious. 3. It will be easy. 4. It was so healthy. 5. It is so low. 6. It will be so small.

VII. Summarize the text

Lesson 8

VOCABULARY

bone	ոսկոր
requirement	պահանջ
particularly	հատկապես
density	խտություն
contract	կրճատել
blood	արյուն
to clot	մակարդվել
to withdraw - withdrew - withdrawn	ետ վերցնել
content	պարունակություն
to absorb	ներծծել
cereal	հացահատիկ
to deposit	նստվածք առաջացնել
to obtain	ստանալ
ingest	կլանել, կուլ տալ
supplement	հավելում
unfortunately	դժբախտաբար
to restrict	սահմանափակել

KIDS AND CALCIUM

The need for calcium is important for people of all ages, but it is especially strong in the growing years. The requirements for calcium are highest during the teen years, particularly for girls, and they increase again after age fifty when bone density begins to decrease.

The human body contains more calcium than any other mineral. About 99 per cent of your body's calcium is in your bones – the remaining one percent is located in our body fluids and cells.

Calcium has roles besides building bones and teeth. It helps your muscles contract, your heart beat, your blood clot, and your nervous system send messages. If your food choices don't supply enough calcium, your body withdraws it from your bones to do these jobs. If your diet supplies enough calcium, your body deposits some in your bones.

While calcium can be found in a variety of foods, dairy foods are the best source of calcium because they have a high calcium content and the calcium can be easily absorbed by the body. Other foods, such as vegetables and juices and cereals, are healthy sources of calcium, but just 11-14 servings of cabbage soup can provide you with the same amount of calcium as in 3 to 4 glasses of milk. Milk also provides other essential nutrients, including, vitamins D, A, and B12, potassium, magnesium, protein, phosphorus, and riboflavin.

Calcium works in partnership with other nutrients like vitamin D, which helps deposit calcium in bones and teeth, and phosphorus, which is important to the structure of bone. Regular physical activity is another factor in building and keeping healthy bones. Experts believe calcium should be obtained from natural dietary sources, however, if calcium cannot be ingested dietarily, calcium supplements can be given to children. For optimal absorption, no more than 500mg should be taken at any one time. It is best to take calcium supplements between meals. Unfortunately, most children and teens do not meet the dietary calcium recommendations. Parents should ensure that their children and teens get enough calcium. They need to watchful of dieting done by their children – eating plans that restrict food often restrict calcium, too.

I. Answer the questions:

1. What is important for people of all ages?
2. When are the requirements for calcium highest?
3. How much calcium does the human body contain?
4. What important roles does calcium have?
5. Where is calcium found?
6. What does milk provide?
7. Can calcium supplements be given to children?
8. What is vitamin D important for?
9. When is it best to take calcium supplements?
10. How many mg of calcium are optimal to take?

II. Find English equivalents for the following in the text:

կալցիումի պահանջը, բոլոր տարիքի մարդկանց համար, հատկապես աղջիկների համար, աճի տարիների ընթացքում, հեղուկների և բջիջների, քո մարմնի կալցիումի մոտավորապես 99 տոկոսը, սննդի զանազանություն, կաթնային սնունդ, կալցիումի նույն քանակը, կաթը մատակարարում է այլ էական սննդարար նյութեր, ներառյալ, կալցիումը կարող է հեշտությամբ կլանվել, դեռահաս տարիների ընթացքում, մկանների կրճատում, եթե քո սննունդը մատակարարում է բավականին կալցիում, տերևաբանջարեղեն

III. a) Use one the following verbs to complete the given sentences: *roles, provides, training, requirements, believe.*

1. The ... for calcium are highest during the teen years. 2. Calcium has also other ... besides building bones and teeth. 3. Milk also ... essential nutrients. 4. ... helps you to strengthen bones in your arms and legs. 5. Experts ... calcium should be obtained from natural dietary sources whenever possible.

b) Correct the wrong sentences

1. The need for calcium is important for peoples of all ages. 2. The human body containing more calcium than any other mineral. 3. It help your muscles contract, your heart beat and nerves system send messages. 4. Experts believe calcium should be obtained from natural dietary sources whenever possible. 5. No more than 500mg should be take at any time. 6. Most children and teens do not meet the dietary calcium recommendations.

IV. Choose the correct word:

1. The human body (*contains/containing*) more calcium than any other mineral. 2. Calcium has roles (*besides/beside*) building bones and teeth. 3. If your food choices (*don't/doesn't*) supply enough calcium your body (*withdraws/withdraw*) it from your bones to do these jobs. 4. (*Other/another*) foods, such as green leafy vegetables and fortified juices and cereals are healthy sources of calcium. 5. Regular physical activity is (*another/other*) factor in building bones. 6. It is best (*to take/taking*) calcium supplements between meals.

V. Fill in the following missing words:

very funny, shy, rude, pleasant, terrible, good looking

1. He was one of the most ... man she had ever seen. 2. We had really ... time in Britain last week. 3. The play was ... last night. At least half of audience walked

out in the middle of it. 4. He was ... as a child and hated going to parties and meetings. 5. I think Martha is going to have a lot of problems with her children. They are so ... to everyone. 6. You must go and see the new film. It is

VI. Put the verbs in brackets into the correct forms:

THE SEA ON STRIKE

Many years ago a London theatre (to perform) a play in which there was a great storm on the sea. In those days the theatres (to have) no machines. That's why the manager (to engage) several boys to make the waves of the sea. They (to jump) up and down under a big piece of sea-green cloth. The "waves" (to get) a shilling a night for their work.

They (to work) for several weeks. But then the manager (to decide) to pay the less money – only a sixpence a night. So the boys (to decide) to go on strike. During the performance, when the storm (to begin) manager (to lift) one corner of the "sea" and said to the boys: "(to make) waves, boys! (to make) waves!"

"You (to want) waves for a shilling of for sixpence?" (to ask) a boy in a loud voice.

"Oh, for a shilling" (to answer) the manager.

The boys (to begin) to jump up and down again so well that the storm (to look) quite real.

VII. Summarize the text

Lesson 9

VOCABULARY

to argue	վիճել, փաստարկել
routine	սահմանված կարգ, որոշակի ռեժիմ
routine	սահմանված, որոշակի
mate	ընկեր(ակից)
dense	սնուցիչ
to prevent	կանխել
irritable	ոյուրագրգիռ
fatigue	հոգնածություն
to refute	լքավորել վառելանյութով
burdensome (ծանրաբեռնող, ճնշող
respiratory	շնչառության, շնչառական
miserable	խղճուկ
to skip	ցատկոտել, խուսափել
to associate	հաղորդակցվել
attitude	վերաբերմունք
fasting	անոթի, պաս

BREAKFAST

We often hear that breakfast is the most important meal of the day, yet millions of people routinely skip it. Our excuses vary: “I’m on a diet”, “We’re just not hungry in the morning”, “We don’t have time”, or “I don’t like breakfast foods”. But as one health expert states, “of all the nutritional mistakes you might make, skipping breakfast is the biggest”.

Breakfast is often a nutrient dense meal which may provide $\frac{1}{4}$ of all daily nutrient needs including vitamin C, calcium, and iron, but only $\frac{1}{5}$ of our total daily calories. Children who eat breakfast are more likely to get enough daily fiber.

Eating breakfast prevents many of the negative effects of fasting, such as irritability, fatigue, aggression, and sleepiness. Research shows that hungry school children are not only more likely to have problems learning, but also have more behavior problems than their breakfast-eating mates. Eating breakfast is also associated with better attitudes toward work and school.

The brain's primary source of energy is glucose (blood sugar), and because it does not store reserves, it is sensitive to the drop in blood sugar levels that result from 8 to 12 hours of overnight fasting. The brain's supply of glucose must be refueled with healthy food to perform properly. This is especially true for children, who have smaller energy reserves, burn energy faster and are more active.

Every day a child has to use listening skills, be organized, concentrate, meet expectations, and generally perform himself mentally, physically and socially. Breakfast makes children be ready for these demands, but they become burdensome for the child who is hungry. Hunger limits a child's ability to learn about his or her world. Hungry children have more respiratory illness and are absent from school more than children who eat breakfast. Adults can adjust to skipping breakfast – *children can't*. It makes them feel sick, weak, and miserable.

Why should you eat breakfast? You “break the fast” at breakfast. It has probably been 10-14 hours since you last ate. Your body needs food like a car needs gasoline – food gives you energy. What you choose for breakfast can make a difference, too. Sugar foods (soda, doughnuts, etc.) create a rise in blood sugar levels and a quick burst of energy. About an hour later blood sugar and energy decline, bringing on symptoms of hunger. But a balanced breakfast containing carbohydrate, protein and fat gives time-released energy that prevents you from feeling hungry for several hours.

I. Answer the questions:

1. Is breakfast the main meal of a day?
2. Why should we eat breakfast?
3. Why do millions of people routinely skip breakfast?
4. What does eating breakfast prevent?
5. What does breakfast provide with?
6. Are you a breakfast eater or a breakfast skipper?
7. What problems do hungry school children have?
8. What is the brain's primary source of energy?
9. How does hunger harm a child?
10. What does food give us?

II. Find English equivalents for the following in the text:

միլիոնավոր մարդիկ, խուսափել նախաճաշը, սննդարար, սխալ, ապահովել, կանխել, բացասական ազդեցություն, ուղեղ, գլուկոզաի մատակարարում, առողջարար, սնունդ, պատրաստ լինել, շնչառական հիվանդություն, ծանրաբեռնող, խղճուկ, պարունակել

III. Complete the sentences giving as many reasons as possible:

1. Eating breakfast prevents
2. Eating breakfast is associated
3. Morning hunger reduces
4. Hungry children have more
5. You choose for breakfast
6. Eating breakfast may help you

IV. Explain the difference between the given words and use them in your own sentences:

1. *hear* and *listen*
2. *food* and *meal*
3. *keep* and *prevent*
4. *make* and *do*

V. Quickly look through the list and mark the lettered word in meaning of the word tested:

1. ill (*i* bad, *ii* wicked, *iii* poorly)
2. careful (*i* attentive, *ii* accurate, *iii* particular)
3. offer (*i* advance, *ii* move, *iii* suggest)

4. learning (*i* teaching, *ii* studying, *ii* analysing)
5. contain (*i* comprise, *ii* involve, *iii* store)

VI. Put in *during, while, for*:

1. We didn't speak ... the breakfast.
2. We didn't speak ... we were eating.
3. What you choose ... breakfast can make a difference, too.
4. What would you like ... dinner?

VII. Summarize the text:

Lesson 10

VOCABULARY

obesity	գիրութիւն
to fend	հոգալ
furthermore	բացի այդ
premise	նախադրյալ
prenatal	նախածննդաբերական
prevalent	գերիշխող
cognitive	իմացական
irritability	դյուրագրգռութիւն
concentration	կենտրոնացում
achievement	նվաճում

CHILDREN'S NUTRITION AND LEARNING.

Children receive messages about food and nutrition from television and food packaging. It is determined that television advertises foods high in sugar, salt, or fat. We all learn about nutrition from what we observe around and at home.

Children of all socioeconomic levels are at-risk for poor nutrition. Some children do not get enough to eat each day because their families lack money to buy sufficient food. Other children consume enough food but have diets high in fat, sugar, and sodium that put them at risk for obesity or heart disease and other chronic illnesses. Nowadays more children are being left to fend for themselves for meals. The premise that nutrition affects children's ability to learn is not new.

Inadequate weight gained during pregnancy can increase the risk of having a low birthweight (under 5.5pounds) baby. Low birthweight infants are more likely than other infants to have hearing, vision, or learning problems and to require special education services. Recent evidence indicates that 15% of very low birthweight children and nearly 5% of low birthweight children require special education, compared to 4.3% of children born at normal birthweight.

Iron deficiency is one of the most prevalent nutritional problems of children. Iron deficiency in infancy may cause a permanent loss of IQ later in

life. Iron deficiency and anemia lead to shortened attention span, irritability, and difficulty with concentration. Consequently, anemic children tend to do poorly on vocabulary, reading, and other tests.

Several studies have found effects of hunger and poor nutrition on cognitive ability. One such study found that among fourth grade students, those who had the least protein intake in their diets had the lowest achievement scores.

A laboratory study that involved healthy, well-nourished school-aged children found a negative effect of morning fasting on cognitive performance. A test of the speed and accuracy of response on problem-solving tasks given to children who did or did not eat breakfast found that skipping breakfast had an adverse influence on their performance on the tests.

Children who are hungry or undernourished also have more difficulty fighting infection. Therefore, they are more likely to become sick, miss school, and fall behind in class.

I. Answer the questions:

1. Where do children receive messages about food from?
2. What foods does television advertise?
3. Why don't children get enough nutrition each day?
4. Does nutrition affect children's ability to learn?
5. What is one of the most prevalent nutritional problems of children?
6. What can iron deficiency and anemia lead to?
7. What difficulties do children who are hungry or undernourished have?
8. What do anemic children tend to do poorly?
9. What problems are low birthweight infants likely to have?
10. Can skipping breakfast influence on children's learning abilities?

II. Find English equivalents for the following in the text:

դրամի պակաս ունենալ, գնել բավարար քանակության սնունդ, օգտագործել սնունդ, գիրության կամ սրտի հիվանդություն, շատ երեխաներ իրենք են հոգ տանում իրենց սննդի մասին, երեխաների սովորելու կարողությունը, սննդի և սովորելու միջև, սննդի կրթության կարևորությունը, երկաթի պակասությունը, կարող է պատճառ հանդիսանալ:

III. Put in the missing words using the list given below:

difficulty, miss, poor, negative, fall, increase, sick, receive

1. Children of all socioeconomic levels are at-risk for ... nutrition. 2. Inadequate weight gained during pregnancy can ... the risk of having a low birthweight baby. 3. A laboratory study that involved healthy, well-nourished school-aged children found a ... effect morning fasting on cognitive performance. 4. Children ... messages about food and nutrition. 5. They become ..., ... school, ... behind in class. 6. Children who are hungry also have ... fighting infection.

IV. In each group of words find the “wrong” one. Compare their meanings:

1. lack, absence, want
2. disease, illness, attack
3. increase, add, spread
4. study, analyse, plan
5. get, catch, observe
6. establish, found, start

V. Use the prepositions where it is necessary:

1. Children ... all socioeconomic levels are at-risk ... poor nutrition. 2. Other children consume enough food but have diets high ... fat, sugar and sodium that put them ... risk ... obesity. 3. Iron deficiency is one ... the most prevalent nutritional problems 4. Several studies have found effects ... hunger and poor nutrition ... cognitive ability. 5. Children receive messages about food and nutrition ... television. 6. We all learn about nutrition ... what we observe around and at home.

VI. Translate the derivatives of the following words:

economy – economic – economist – economical
nutrition – nutritious – nutritive
to educate – education – educated – educational – educator
to consume – consumption – consumer
to perform – performance – performer
deficit – deficient – deficiency

VII. Summarize the text

Lesson 11

VOCABULARY

crucial	վճռական
precedent	նախադեպ
cancer	քաղցկեղ
infant	մանուկ, երեխա
digestive	մարսողական
frequent	հաճախակի
snack	թեթև կերակուր
buckwheat	հնդկացորեն
to assure	հավաստիացնել, երաշխավորել
starchy	օսլայաշատ
stable	կայուն
neurological	նյարդաբանական
worrisome	անհանգստութիւն պատժառող
preferably	գերադասելով, նախընտրելով

CHILDREN'S NUTRITION.

Childhood nutrition sets a crucial precedent for future health. It may even have the greatest influence on a person's health later in life. Poor childhood nutrition during the ages of 4 through 18 may be a reason of later diseases such as heart disease, high blood pressure, or cancer, while proper nutrition may assure good long-term health.

School-aged children do not grow as fast as younger children or infants, because they have smaller digestive system, and antioxidants. In addition, children need foods that will supply them with adequate calories for energy as well as proper proteins and fats to nourish their internal organs and physiological structure. In addition to fruits and vegetables, children should be encouraged to eat whole grains and starchy roots like corn, buckwheat, rice, wheat, potatoes, and etc.

Protein is another requirement for growing muscles and organs. Meat, eggs, chicken, lamb, turkey, and fish provide protein, iron, vitamins and minerals. Nuts, seeds, bean offer vegetarian sources of protein. Dairy products are another great source of protein, and offer calcium for growing bones. Products that are high in fat content should be avoided at all costs. Egg, olive oil, fish oils, i.e. healthy fats not only provide a good, stable energy source for a child, they are also necessary for proper brain growth and neurological system development. Of course, any child wants ice cream, soda, and candy, and small amounts aren't worrisome. However, the majority of the diet is healthy, and offers a variety of foods from the four groups, preferably from organic sources.

I. Answer the questions:

1. What may have the greatest influence on a person's health?
2. Can poor childhood nutrition cause any disease?
3. What do fruits and vegetables supply us with?
4. Why is protein so important for children?
5. What products should we avoid in our diet?
6. Why do school-aged children grow slower than infants?
7. What should children eat in addition to fruits and vegetables?
8. What food provides protein, iron, vitamins and minerals?
9. What do dairy products offer for growing bones?
10. What products do children need for proper brain growth?

II. Find English equivalents for the following in the text:

սնունդը մանուկ ժամանակ, ունենալ ամենամեծ ազդեցությունը, արյան բարձր ճնշում, դպրոցական տարիքի երեխաները, լավ ընտրություն, ապահովել հիմնական վիտամիններով, հանքային նյութերով և հակաօքսիդանտներով, ներքին օրգաններ, ֆիզիոլոգիական կառուցվածքը, կաթնամթերք, աճող ոսկորների համար, պետք է խուսափել ճարպեր պարունակող ապրանքներից, ամեն գնով, իրենց սննդի մեծամասնությունը, ուղղի ճիշտ աճի համար, գերադասելով օրգանական աղբյուրներից:

III. Put the sentences together:

- 1.Children nutrition sets a crucial precedent for... ... necessary for proper brain growth and neurological system development.
- 2.School-aged children do not grow... ... with a consistent energy source.

- | | |
|--|--|
| 3. Quality carbohydrates provide children... | ... growing muscles and organs. |
| 4. Protein is another requirement for... | ... future health patterns. |
| 5. Products, that are high in fat content should be... | ... avoided at all costs as they oxidize and age cellular structure. |
| 6. Healthy fats also... | ... as fast as younger children. |

IV. Make these sentences negative:

1. School-aged children grow as fast as younger children.
2. Fruits and vegetables are good choices as they supply essential vitamins, and minerals.
3. Products should be avoided at all costs as they oxidize and age cellular structures.
4. Your child will want ice cream, and candy.
5. A diet offers a variety of foods from the four food groups.

V. a. Match the following words with the opposites given below:

1. past, high, good, early, big, majority
2. small, low, present, bad, late, minority

b. Read the text and answer the questions:

MEALTIMES

Two things never fail to confuse foreigners when they come to Britain: cricket and British meals. However, whereas the visitor can live without understanding cricket, it is almost impossible to survive without an understanding of British eating habits.

Understanding British meals is one of the great mysteries to the foreign visitor. Over the centuries, the British have shown a tendency to name and re-name their meals, and to move them about the day in an apparently random fashion. Different names to each meal depend on the social class and part of the country people live in.

Breakfast, which was once taken at 5 o'clock in the morning, can now be at any time before 11.30. It has thus overtaken dinner. In Norman times – 12th century – dinner was at 9am; by the 15th century it had moved to 11am; and today it can be eaten at any time between noon and 2.30 in the afternoon and is called lunch by a large proportion of the population, especially the middle and upper classes and people from southern Britain. Many farmers and peasants, however, who start work at sun-rise and have their breakfast before they go to work, still stop for a lunch break at about 9 o'clock.

In the 14th century, supper was at 4 o'clock – which is now called tea-time. But outside the south-east of England, working families have tea or high tea at about 6 in the evening while the rest of their fellow-countrymen have dinner, which is often also called supper, at about 7.30pm.

Fill in the gaps in these sentences:

4. The British have a meal in the morning before they go to work; usually call it...
5. They then have a meal in the middle of the day; this is called ...
6. After work, they sit down to an evening meal; this is called ...
or...or...or...

VI. Match the words on the right with the definitions given on the left:

Prefer	unit of quantity of heat
Brain	prepare food in stomach for assimilation in body
Choose	like better
disease	process in organism by which food is built up into living matter
Digest	food; act of giving or receiving food.
Calorie	state of being different, many-sidedness
Variety	grayish-white nerve substance in skull of vertebrates; center of thought, feeling
Nutrition	unhealthy condition, illness
metabolism	pick out with preference; select from many
Require	need; demand; make necessary

VII. Summarize the text

ADDITIONAL TEXT

Baby Food

Part I

It has been always been an accepted fact that the best food for babies younger than six month is mother's milk due to the composition and content of various vitamins and essential aminoacids. However, many babies are fed with ordinary cow's milk to which some water and sugar are added.

Powdered baby food available on the market comprises a large group of products with different compositions, which can be classified in the following groups:

- Ordinary whole milk powder
- Whole milk powder with added carbohydrates
- Fermented milk
- Humanized milk
- Products with starch

Ordinary whole milk powder – The simplest type of baby food is whole milk powder with 25 to 28% fat in the solids, or half-cream milk powder with about 14% fat. Usually some vitamins are added, e.g. A, B₁, and D₂, in order to equalize the seasonal variations in the vitamin content of natural milk, and to keep it, throughout the year, at the optimum standard level required for babies.

Whole milk powder with added carbohydrates – This group of baby foods is again based on full-cream or half-cream milk with added sucrose and maltodextrine. The sucrose is added to the milk prior to the evaporation. This allows for pasteurization of the sucrose as well, and a final product with an acceptable plate count is produced. Today industrial ready-made maltodextrine is available in most places. The maltodextrine is then mixed with partially concentrated milk. Very often vitamins are added as well. The whole mixture must be homogenized before drying. If the preparation of the feed is a batch process there will be some storage and delay between the evaporator and the dryer.

Part II

Fermented milk – The next group of products is fermented milk, usually half-cream made by means of special culture starter strains. In this case the pre-concentrated milk – usually hot – is inoculated by a starter, which is normally a mixture of streptococcus lactic and lactobacillus and fermented at a slightly elevated temperature for 6-10 hours. After the required acidity has been achieved the fermented concentrate is homogenized, cooled and spray dried.

Humanized milk – The biggest group of baby food is the so-called humanized milk. Human milk has a very different composition from cow's milk, as it has a higher content of lactose, a lower content of proteins with different protein composition (mainly an albumen milk while cow's milk is a casein milk) and a different fat composition (as it has a considerably higher content of unsaturated fat acids) and a lower content of minerals.

There are different steps of humanization. The simplest one is merely to increase the content of lactose and add some vegetable fat to increase the amount of unsaturated fat acids. Other additives, such as vitamins, ferric ions or lactulose (galaktosido-fructose) are used as well, with the aim of converting cow's milk into a composition as close as possible to human milk.

Products with starch – Another big group of baby foods contains starch. The starch can be added to the process either by dry dosing or in liquid form together with the remaining components:

a. Dry dosing – whole milk and sucrose are mixed and pasteurized, after which it is evaporated to about 45% total solids and spray dried at 180⁰C. The powdered starch is dosed via the fines return system into the spray dryer and is agglomerated with the concentrate particles. The agglomeration of the starch is very important to avoid separation in the cans during storage. As powdered starch often contains bacteria, a gamma radiation can be necessary to ensure an acceptable end product.

b. Liquid mixing and pasteurizing offer the advantage that the starch can be pasteurized. If the pasteurization temperature is kept below 60⁰C, the starch will not be precooked, and the mixture is dried from a feed with 45% solid and a drying temperature of 180⁰C. If the pasteurized temperature exceeds 72⁰C, the starch will be precooked and the viscosity will increase. Due to this the solids content must be reduced to 20-25%. Drying temperatures will be 180⁰C. Bag filters on the exhaust air must be foreseen, as the powder loss will otherwise be too high.

Answer the questions:

1. What is the best food for babies younger than six month?
2. What powdered baby food do you know?
3. What is whole milk powder?
4. What is whole milk powder with added carbohydrates?
5. What is fermented milk?
6. What is humanized milk?
7. What are products with starch?

UNIT 5

WINE-MAKING TECHNOLOGY



Lesson 1

Vocabulary

ancient	անտիկ, հնադարյան
inherent	հատուկ
yeast syn. Ferment	խմորիչ, թթխմոր
fermentation	խմորում
delightful	սքանչելի
encounter	բախվել
grape	խաղող
grape sugar	խաղողի շաքար
vine	խաղողի որթ, վազ
vintage syn harvest	խաղողաքաղ
vineyard	խաղողի այգի
viticulture	խաղողագործություն
temptation	զայթակղում, հրապուրանք
label	պիտակ
ample	լիառատ
release	ազատ արձակում
vessel syn bowl, jar	գավաթ, թաս
intoxicating	հարբեցնող
induce	առաջացնել
antiseptic	հականեխիչ, հակաբակտերիալ
immortalize	հավերժացնել, անմահացնել

History of Wine

Wine has a long history and individual bottles of wine can have their story too. These two aspects add greatly to wine's place in our cultural history. Wine was one of the first things that Man created, and it has held a special place in many cultures. The history of wine is also an intriguing story of technical innovation, as Man applied his intelligence to the problems posed by the first chemical reactions that he encountered: fermentation and oxidation. No one can know who made the first wine. The great classical civilizations of Greece and Rome traced it back into their prehistory, and built legends around its discovery. Ancient Egypt has left us wine lists and wall paintings. Indeed, the Egyptians recorded the vintage, vineyard and winemaker on individual jars of wine: the first wine labels.

Wine can be and is made from wild grapes. The grape is the fruit that with its concentrated sugar and ample juice has an inherent tendency to ferment. Fermentation makes alcohol and this will take place when the grapes are ripened and the juice released comes into contact with yeast there in plenty in wild form on the skins of the grapes. So if the grape juice is held in a container, wine will make itself. Pure conjecture leads us to a Stone Age man who placed ripe grapes in a vessel clay pot, wooden bowl or skin bag and, perhaps forgetting them, left them to ferment. In warm conditions this will happen in hours rather than days, and in days there will be wine of a sort. Who was the first to drink this intoxicating and delightful juice. We can never know, but perhaps he or she also had the first wine to induce headache. At feasts, religious ceremonies, as antiseptic medicine wine played many roles. But only comparatively recently in its history came the biggest breakthrough: when the ability to age wine was mastered, allowing us to keep it perhaps for years, improving in cask or bottle, fine wine was born.

Modern Times

The last 90 years have seen a revolution in the wine industry. The scientific background of wine making has developed greatly, allowing for many things that were once impossible to be accomplished. An example of this would be refrigeration. Before the 1940s, wine was supplied to people according to their geographic location. After the development of refrigeration, it was easier for wineries to control the temperature of their fermentation process. This enabled high quality wines to be produced in hot climates.

Machines that harvest grapes more quickly have allowed vineyards to become larger and more efficient. Grapes can also be harvested during day or night, allowing vineyards to control the temperature and climate when grapes are harvested.

Modern wine makers can now achieve total control of every stage of wine making from harvesting and crushing to bottling. Though recent advances in technology have benefitted the wine industry, they have also led to the temptation to produce more wine at the expense of quality. Wine makers face the challenge of producing wine for a larger market without losing the character and individual flavor of their wines.

More countries are producing more varieties of wine than ever before. Advances in technology will ensure that it will continue, with more countries producing more wine, and better wine.

1. Find the equivalents for the following in the text.

Գինին առաջին հայտնագործություններից մեկն է. Տեխնիկական նորարարություն. Բախվել քիմիական ռեակցիաների հետ. Խմորում և օքսիդացում. Խաղողաքաղով և խաղողագործներով պատկերված. Խաղողը հակում ունի խմորվելու. Խմորման արդյունքում առաջանում է ալկոհոլ. Կուտակվում են հասած խաղողի պտղամաշկի վրա. Երբ խաղողը լցվում է տարաների մեջ և պահվում, դառնում է գինի. Քարե դարի մարդը. Կավե ամանների մեջ. Օրերով պահված գինիները դառնում են բարձրորակ. Գինին օգտագործվել է թե՛ որ պես բուժիչ և թե՛ որպես հակաբակտերիալ միջոց. Գինու հնացման տեխնոլոգիա. Տեսակավոր գինիներ:

2 Give Armenian equivalents for the following.

It has held a special place in many cultures; technical innovation; the first chemical reactions; fermentation and oxidation; wine lists and wall paintings; the first wine labels; wild grapes; concentrated sugar; tendency to ferment; come into contact with yeast; the skins of the grapes; pure conjecture; clay pot ;wooden bowl; skinbag; intoxicating and delightful juice; as antiseptic; improving in cask or bottle.

3. Use the verbs in parentheses in the correct tense form

1. No one can know who (to make) the first wine. 2. Wine was one of the first things that Man (to create), and it (to hold) a special place in many cultures.3. Though recent advances in technology (to benefit) the wine industry, they also (to lead) to the temptation to produce more wine at the expense of quality.4. The great classical civilizations of Greece and Rome (to trace) it back into their prehistory, and (to built) legends around its discovery. 5. Pure conjecture leads us to a Stone Age man who (to place) ripe grapes in a vessel clay pot, wooden

bowl or skin bag and, perhaps (to forget) them (to leave) them to ferment.6. If the grape juice (to hold) in a container, wine (to make) itself.7. Modern wine makers can now (to achieve) total control of every stage of wine making.

4 Complete the table.

NOUN	VERB	ADJECTIVE
growth		
	vary	
		distinguished
category		
	use	
		specific
		delightful
	describe	
		recognized

5 Match the words with their definition.

1.innovation	1.a chemical process in which two or more substances act mutually on each other and are changed into different substances, or one substance changes into two or more other substances.
2.reaction	2.a new thing or a new method of doing something.
3.pure	3.a process in which a chemical substance changes because of the addition of oxygen.
4 vineyard	4.a producer of wine, a winegrower.
5.winemaker	5.the liquid obtained from or present in fruit or vegetables.
6. jar	6.not mixed with anything else.
7.vintage	7.fully grown and ready to eat.
8.oxidation	8.a plantation of grapevines, typically producing grapes used in winemaking.

9.ripe	9. the year or place in which wine, esp. wine of high quality, was produced.
10.juice	10. a glass container with a lid that is used for storing food.

6Summarize the text.

Lesson 2

Vocabulary

hoe	փիսրեցնել
syn. dig	
tendrils	շիվ
pruning	Էտում
graft	տնկաշիվ
restaking	վերադասավորում
manuring	պարարտացում
syn. fertilization	
absorbent	Ներծծող, կլանող
blight	վնասատու միջատ
syn. Insect	
fungus, fungi(pl)	սունկ
spore	սպոր, մանրէ
syn. microorganisms	
saccharomycets	շաքարասնկեր
stalk	ողկոյզ
syn. hackle	
pressing	մամլում
to attempt	փորձել

How wine is made

There are three main phases in the production of wine; the cultivation of the vines, the gathering and pressing; fermenting of the grapes; and the care of wine after fermentation. As soon as one year's vintage is over, next year's cultivation begins. If grafted vines are being used any tendrils from the stalk must be cut off. Then follow the pruning and restaking of the vines, and sometimes the manuring of them. Throughout the spring and early summer, the earth is repeatedly hoed to keep it free from weeds, and to keep the topsoil light and absorbent against later drought. The vines at intervals are sulphured and sprayed with chemicals to ward off blight.

The grape harvest takes place in September or October; the farther the north, the later the harvest. A wine harvest is a chancy thing. Most grapes are

picked at the instant they are ripe, however where a smut wine is to be made, the harvest is delayed until the grapes are beginning to rot. The grapes must not be gathered until it is judged that the saccharomycetes have settled in sufficient quantity.

As the grapes ripen in the sun, an important thing happens. Microscopic spores or fungi settle on the skin from the air. These spores have a vital part to play in the making of wine. They settle in millions on the skin, in an attempt to get at the grape-sugar in the juice, on which they would feed.

The harvest then takes place with all speed, because rain would wash off these tiny spores. The vintagers, therefore, work over the vines day after day, till all the grapes have been picked. If there is rain during the harvest, gathering is held up till vines have had a chance to dry.

In some areas selection is made on the spot. In this way the best and the poorer berries are gathered separately and wines of corresponding quality produced from each.

Bad berries would, if mixed with good, lower the quality of the finest wine. Such selection is very strictly carried out in Germany, where the wines are classed by the quality of the grapes from which they are made. There only the good, ripe berries are picked, and all others left till they in turn become ripe. The vintagers, therefore, work over the same vines day after day, till all the grapes have been picked. At the selection on the spot takes place also in Champagne. Sherry grapes, too, must be heavy in grape-sugar. They are, however, picked when ripe, and then left on straw mats to ripen still further in the sun.

Exercises

1 Find English equivalents for the following in the text.

Գինու արտադրությունը ներառում է երեք հիմնական փուլեր. վազերի մշակում, հավաքում և մամլում. խաղողի խմորում. գինու խնամքը խմորումից հետո. հողը պարբերաբար փխրեցվում է. գերծ պահել մոլախոտերից, միկրոսկոպիկ սպորները կամ սնկերը օդից նստում են պտղամաշկի վրա, վնասատուներին ոչնչացնելու համար, ցողում ենք քիմիական նյութերով. էական նշանակություն ունենալ. միլիոնավոր մանրէներ հավաքվում են պտղամաշկի վրա. սնվել խաղողի հյութի մեջ եղած շաքարով. սելեկցիան կատարվում է տեղում. բերքահավաքը կատարվում է արագությամբ. անձրևները վերացնում են մանրէներին:

2 Give Armenian equivalents for the followings.

Cultivation of the vines, fermenting of the grapes, to ward off blight, to keep the top soil absorbent, microscopic spores, restaking of the vines, grape-sugar in the juice, against later drought, vintagers work over vines, the grapes have been picked, the wines are classified by the quality of grapes, the selection of the spot, sherry grapes, grape sugar, they are picked when ripe, area selection, in sufficient quantity, free from weeds,.

3 Match the words and arrange them in pairs.

- | | |
|-------------------|------------------|
| 1. rot | 1. must |
| 2. harvest | 2. to eliminate |
| 3. spray | 3. fertilization |
| 4. grape-juice | 4. fungi |
| 5. sacharomycetes | 5. decay |
| 6. manuring | 6. vintage |
| 7. to ward off | 7. sprinkle |
| 8. blight | 8. insect |
| 9. soil | 9. hackle |
| 10. stalk | 10. land |

4 Choose the correct word and use the right form.

1. Microscopic spores or settle on the skin from the air.

Fungi Microorganisms Sacharomycetes

2. They settle in millions on the, in an attempt to get at the grape-sugar in the juice, on which they would feed.

Skin Peel Upper layer

3. The grape takes place in September or October.

Harvest Vintage Yield

4. The harvest is delayed until the grapes are beginning to

Destroy Decay Rot

5. The vines at intervals are sulphured and sprayed with chemicals to ward off

Pest Insect Blight

5 Translate the sentences paying attention to the passive constructions.

1. If grafted vines are being used, any tendrils from the stalk must be cut off.
2. Most grapes are picked at the instant they are ripe, however where a smut wine is to be made, the harvest is delayed until the grapes are beginning to rot.
3. After selection the grapes are sometimes separated from the stalks before pressing.
4. Sometimes, however, the stalks are retained to give more body to the wine.
5. The vines at intervals are sulphured and sprayed with chemicals to ward off blight.
6. Throughout the spring and early summer, the earth is repeatedly hoed, to keep it free from weeds.

6 Answer the following questions:

1. Which are the main phases for production of wine?
2. Why are the vines sprayed with chemicals?
3. What part do the spores play in wine making?
4. Why does harvest take place with all speed?
5. How is the selection in some areas made?
6. When are most grapes picked?

Ex.7 Summarize the text

Lesson 3

Vocabulary

berry	հատապտուղ, պտուղ
beverage	խմիչք, ըմպելիք
skin	պտղամաշկ
pip	կորիզ
flesh	պտղամիս
ethyl alcohol	Էթիլ սպիրտ
carbon dioxide	ածխաթթու գազ
vat	տակառ
syn. cuve	
burst	պատռել
premier vin	ինքնահոս քաղցու
bare-footed adj	բոբիկ ոտքերով
crush	ջարդել, տրորել
acid	թթու
draw	ներկել
must	քաղցու
syn. grape-juice	
stalk	ողկույզ
syn hackle	
rape	չանչ
sieve	մաղ
bacterium(pl bacteria)	միկրոբ, մանրէ

Pressing

When the grapes have been taken to the chateau, or the place where the wine is to be made, they are sometimes separated from the stalks before pressing. This operation is called, in France, egrappage, and is usually done by a mechanical sieve. Sometimes, however, the stalks are retained to give more body to the wine.

Pressing is carried out for two main reasons: to free the grape-juice from the skins, pips and flesh, and to enable the saccharomycetes to get at the grape-sugar in the juice and ferment it.

The methods of pressing are varied in the different regions; only the principles can be given here.

In Bordeaux the presses are in many cases placed on a level above the vats, or cuves. Under pressure the grapes burst their skins and the juice runs out into the cuves. This grape-juice makes the premier vin. The grapes are then further pressed, and the juice or must extracted goes to make the vins de presse-wines of rather poorer quality. A similar system is employed in the other wine districts. Each pressing produces a wine of poorer quality than the previous one.

In Champagne the law forbids proprietors to extract more than a fixed amount of must from given quantities of grapes. This ensures the high quality of the resultant wine. Furthermore, the poorer wine obtained from the later pressing is not allowed to be called "champagne".

In Douro pressing is carried out by the vintagers dancing on the grapes bare-footed. The gentle pressure of the feet bursts the grape-skins and allows the juice to run out, but does not crush the pips of the berries. These pips have a high acid content which, if mixed with the must, would spoil the wine. Also, the warmth of the soles of the feet assists the early stages of fermentation.

If white wine is being made from black grapes, then the juice must be quickly separated from the skins and stalks, or the wine would be "coloured". Champagne, for example, is largely made from black grapes, and it requires great skill to keep it pure and "white". Red wine, of course, draws its colour from the skins, and the must is usually fermented along with the rape-the skins, stalks and pips.

A natural wine, like claret, is the purest of all beverages. Everything that is required for its production is contained in or on the grape itself. It is only necessary to burst the grape-skin, so that the saccharomycetes can get at the grape-sugar. In the ensuing fermentation, all unwanted bacteria are killed, leaving wine the purest and most hygenic of drinks.

Exercises

1 Translate into English.

Խաղողը երբեմն չանչազատվում է մինչև մամլումը. Գինուն մարմնեղություն տալու համար. Մամլումը կատարվում է երկու նպատակով. պտղամաշկից, պտղամսից և կորիզից խաղողի հյութի անջատում. Հյութի մեջ շաքարասնկերի ներթափանցման ու խմորման համար. Առաջին մամլումից ստացվում է բարձրորակ գինի. Ինքնահոս քաղցու. Դուրոյում մամլումը կատարվում է խաղողի վրա բոբիկ ոտքերով պարելով. Նպաստում է արագ խմորմանը. Եթե սպիտակ գինին պատրաստվում է սև խաղողից, հյութը պետք է արագ ազատվի չանչերից և պտղամաշկից. Գինին կստացվի գունավոր. Կորիզները չեն կոտրվում, նրանց մեջ եղած թթուն չի խանգարում խմորմանը:

2 Translate into Armenian.

1. If white wine is being made from black grapes, then the juice must be quickly separated from the skins and stalks, or the wine would be “coloured”.
2. Red wine, of course, draws its colour from the skins, and the must is usually fermented along with the skins stalks and pips.
3. The gentle pressure of the feet bursts the grape-skins and allows the juice to run out, but does not crush the pips of the berries.
4. In Bordeaux, the presses are in many cases placed on a level above the vats, or cuves.
5. Each pressing produces a wine of poorer quality than the previous one.

3 Match the words with the definitions given below

1.saccharomycete	1.a stone which exists in each fruit
2.vat	2.theferment which turns grape-juice into wine
3.the must	3.the peel or upper layer
4.yeast	4.the inside content of the skin

5.stalk	5.the grape-juice which turns into wine
6.skin	6.the fungi which are the cause of fermentation
7.pip	7.a cask in which the wine is kept
8.flesh	8.the rape and the grape berries together are called...

4 Find the key sentence in the text and make a conversation over it.

5 Match the questions with the answers

1. What is carried out before pressing?
 2. Why is the pressing carried out?
 3. How is the pressing done in Douro?
 4. How is the white wine made from the black grapes?
 5. Why sometimes are the grapes not separated from the stalks before pressing?
-
1. In Douro, pressing is carried out by the vintagers, dancing on the grapes bare-footed.
 2. Sometimes grapes are separated from the stalks before pressing.
 3. Pressing is carried out to free the grape-juice from the skins, pips and flesh, and to enable the saccharomycetes to get the grape-sugar in the juice and ferment it.
 4. If white wine is to be made from black grapes, then the juice must be quickly separated from the skins and stalks.
 5. Sometimes however, the stalks are retained, to give more body to the wine.

6 Translate the text using the vocabulary below.

Wine's effect on the body

Heavy alcohol consumption has been shown to have a damaging effect on the cellular process that creates bone tissue. Long term alcoholic consumption at high levels increases the frequency of fractures. Studies from St. Thomas' Hospital in London and the Epidimiologie de l'Ostioporose medical group in France suggest that moderate wine consumption may offer positive benefits to women, particularly elderly women, in retaining bone density and reducing the

risk of developing osteoporosis. The French study showed that women who drank moderately (1 to 3 glasses a day) had more overall increases in bone density over the two - year study period. However, the physicians who took part in the French study noted that other factors could be in play apart from wine consumption with moderate drinkers being more likely to live active lifestyles that included physical activity which also benefits bone density.

Vocabulary Notes

Cellular –բջջային

Bone tissue- ոսկրային հյուսվածք

Frequency-1.հաճախականություն, 2.արագացում

Fracture-կոտրվածք, փխրունություն

Benefit-օգուտ, շահ, նպաստ

Retaining bone density-ոսկրի խտության պահպանություն

Osteoporosis-ոսկրի քայքայման օջախ

Consumption-սպառում

Lesson 4

Vocabulary

cast	նետել(դուրս նետել)
crust	նստվածք, փառ
encourage syn. assist	օգնել, նպաստել
rigid syn. constant	հաստատուն, կայուն
spirit	սպիրտ
wastage	կորուստ, թափոն
injurious	վնասատու
marc syn. crashed mass	կնճեռ
froth	թրթուռ
fortified wine syn. smut	թնդեցված գինի
cask	տակառ
sediment	նստվածք
residue	նստվածք
sink to the bottom	Նստել հատակին
isinglass	ժելատին, դոնդոդ
racking Syn. cleansing	զտում
fine	խիտ, թանձր
net	զուտ, մաքուր
decant	քամել, զտել

Fermentation

When the grapes have been pressed and the cuves or vats cleaned and sterilized, the must is run into them to be fermented. The cuves are not filled to the top to avoid wastage when the must ferments and boils. Usually, however, the minimum necessary amount of air is allowed to contact with the must during fermentation. Oxygen encourages the growth of other ferments injurious to the action of saccharomycetes, and if these were to gain the upper hand, the wine would be spoiled. In some districts, however, no attempt is made to cut off oxygen, and in the fermentation of sherry it is allowed full contact with the must.

The saccharomycetes, which are the yeasts that cause fermentation, turn the grape-juice, the must, as it is called, into wine by converting its grape-sugar into ethyl alcohol and carbon dioxide.

Fermentation takes place almost at once, and the liquid bubbles and froths as the carbon-dioxide gas is given off. The first fermentation usually lasts from three days to a week. During this period the temperature of the room must be rigidly stabilized. Within limits the higher the temperature the easier the fermentation. In more northern districts, therefore, the air is artificially warmed to assist fermentation.

The fermentation of port and other fortified wines is much different from that of natural wines. Port is a wine of high sugar content. If the wine were left to ferment right out, however, nearly all the grape-sugar would be converted into alcohol, and the wine would be dry. The fermentation, therefore, is artificially stopped at an early stage. This is done by the addition to the must a quantity of alcohol in the form of brandy. The alcoholic content of the must being thus raised, fermentation is cut off and the wine remains rich in sugar.

Care of wine after fermentation

When the first fermentation of a natural wine is ended, the wine is run off into casks, leaving the rape and sediment behind. The residue of the skins, called marc, is mixed with a certain quantity of water, and is used to make poorer-quality wines or spirits. It is necessary to say "first fermentation" because some wines ferment again later either in cask or in bottle.

The new wine gradually settles in its cask and throws sediment, which sinks to the bottom. The wine is then run out into another cask, leaving the unwanted sediment behind. This process, known as "racking" goes on till the wine is quite clear. A final cleansing process called "fining" is then carried out.

A quantity of isinglass or other suitable substance is mixed with the wine. It forms a very fine “net” which, sinking to the bottom, takes down with it the tiniest particles of sediment. The wine is then run off once more, and left to age in wood till bottling time – or till it is shipped abroad.

Wine is a living organism, and, even after bottling, chemical changes are continually taking place. If it is a great wine, it will go on improving for many years. In this process it casts further sediment. A fine, old claret has heavy sediment, while the crust of a vintage port is a well-known phenomenon. It is for this reason that it is necessary to decant old wines and to handle them with the greatest care.

Exercises

1 Find English equivalents for the followings in the text.

Մամլված քաղցուն լցվում է տարաների մեջ: Տարաների բերանները կիսաբաց են լինում: Թթվածնի հետ լրիվ շփումը նպաստում է վնասակար մանրէների առաջացմանը: Օդը արհեստականորեն տաքացնել: Շաքարասնկերը խմորիչներ են: Մնվելով խաղողի հյութի մեջ եղած շաքարով: Վերածում են էթիլ սպիրտի և ածխաթթու գազի: Խաղողի հյութը դառնում է գինի: Խմորումը տեղի է ունենում անմիջապես: Հեղուկի պղպջակները և փրփուրը դուրս են գալիս: Թնդացված գինիներ խմորումը տարբերվում է սովորական գինիներից: Խմորումը դադարեցնելու համար ավելացնում են սպիրտ: Հյութը հոսում է առանց չանչի և նստվածքի: Կնճեղը խառնվում է ջրով ավելի ցածր որակ գինիների ստացման համար: Չտեղու համար գինին պարբերաբար տեղափոխվում է: Գինուն ավելացվում է դոնդող կամ այլ նյութեր: Միանալով ավելորդ մասնիկներին: Հրաշալի բաղադրություն: Լցվում են փայտե տարաների մեջ՝ հնացման համար: Գինիների շշալցում: Նստվածքի վերջնամաքման համար: Գինին կենդանի օրգանիզմ է: Ենթարկվում է քիմիական փոփոխությունների:

2 Translate into Armenian.

1. Oxygen encourages the growth of other ferments injurious to the action of saccharomycetes.

2. The fermentation of port, and other fortified wines, is much different from that of natural wines.
3. Fermentation takes place almost at once, and the liquid bubbles and froths as the carbon-dioxide gas is given off.
4. The residue of the skins, called marc, is mixed with a certain quantity of water, and is used to make poorer-quality wines or spirits.
5. Wine is a living organism, and, even after bottling, chemical changes are continually taking place.

3 Find the explanations for the following words.

1. cleanse	1. a small amount of something that remains after the main part has gone or been taken or used.
2. convert	2. matter that settles to the bottom of a liquid; dregs.
3. residue	3. a small flake of soot or other dirt.
4. brandy	4. a strong alcoholic spirit distilled from wine or fermented fruit juice.
5. rigid	5. cause to change in form, character, or function.
6. sediment	6. make something thoroughly clean.
7. froth	7. not able to be changed or adapted.
8. smut	8. a mass of small bubbles in liquid caused by agitation, fermentation, or salivating.

4 Match the words and arrange them in pairs.

<i>Mark</i>	<i>Cleaning</i>
Residue	Cleansing
Fortified	Crashed mass
Racking	Contribute
Spirit	Smut
Rigid	Brandy

Encourage	Sediment
Turn	Constant
Fining	Convert

5 Fill the gaps with the missing words given below.

Wine tasting is the sensory examination and ----- of wine. Wines contain many chemical ----- similar or identical to those in fruits, vegetables, and ----- . The sweetness of wine is determined by the ----of residual sugar in the wine after fermentation, relative to the acidity present in the wine. Dry wine, for example, has only a small amount of residual sugar.

Some wine labels suggest opening the bottle and letting the wine "breathe" for a couple of hours before -----, while others recommend drinking it immediately. Decanting (the act of ----- a wine into a special container just for breathing) is a controversial subject among wine enthusiasts. In addition to -----, decanting with a filter allows the removal of bitter sediments that may have formed in the wine. ----- is more common in older bottles, but aeration may benefit younger wines.

Compound, amount, evaluation, sediment, serving, pour, spices, aeration

6 Answer the questions.

1. Why aren't cuves filled to the top?
2. What is fermentation?
3. Is air allowed to contact with the must during fermentation?
4. How long does the first fermentation last?
5. Why is fermentation stopped artificially?
6. What is marc?
7. What process is called racking?
8. How is the final cleansing process called?
9. Do chemical changes take place in the wine after bottling?

Lesson 5

Vocabulary

ingenuity	հնարագիտություն
identification	ճանաչում
organoleptically	զգայորոշման
sense	զգացում
sight	տեսք
taste	համ
smell	հոտ
device	սարք, մեխանիզմ
detection	հայտնաբերում
gross	մեծ, մեծածավալ
adulteration	խարդախում, կեղծում
syn trick	
effervescence	թշշում, փրփրայնություն
conformity	համապատասխանություն
froth	փրփուր
generic	հատկանշական

Wine Types.

The varieties of wine are almost as innumerable as nature, coupled with human ingenuity, could make them. The seeming complexities are, however, details within the following broader methods of identification.

a) Identification by General Class Characteristics. General class characteristics are readily identifiable by tests of the finished products. These may be made in the laboratory by chemical and physical analyses, or they may be made organoleptically, i. e. by application of the senses of sight, taste and smell. The first method is usually used as a control device in actual production and also to assist in the detection and prosecution of the grosser forms of adulteration. The latter method is the customary way of evaluating wine during

the trade by consumers. When employed by an expert with a sensitive palate, extensive experience in the comparison of wines and a well- trained taste memory; the organoleptic method has even been recognized as evidence in criminal and civil courts, particularly in Europe. The two methods supplement each other, and not in conflict, and are frequently combined.

The former naturally applies only to detection of matter analytically measurable and has the advantage of presenting comparative conclusions in relatively exact terms. The latter evaluates factors that cannot be detected by analysis, as well as those that can, but does not express comparative conclusions with exactness.

The general class characteristics of a wine are established by its color, by its relative sweetness and alcohol content, by its effervescence or non-effervescence, and by its conformity or nonconformity to accepted standards.

b) Identification by Origin

c) Identification by Grape variety

d) Identification by Semi generic description

The foregoing four methods of describing wines may be used separately and are sometimes used in combination.

Exercises

1 Find the equivalent for the following in the text:

Գինու տեսակները բազմազան են: Օգտվել բնության բարիքներից: Դասակարգում ըստ ընդհանուր բնույթի: Պատրաստի ապրանքի գնահատում: Քիմիական կամ ֆիզիկական անալիզների օգնությամբ: Զգայարաններով՝ տեսողության, համի, հոտի: Մեծաքանակ կեղծիքների հայտնաբերման համար: Սպառողի գնահատումը առևտրի ժամանակ: Դասակարգում ընդհանուր ճանաչողությամբ: Ըստ գույնի համեմատական քաղցրությամբ, փրփրայնությամբ, սպիրտայնությամբ:

2 Give Armenian equivalents for the following.

Human ingenuity, methods of identification, finished products, by chemical and physical analyses, by application of, control device, the latter method, customary way of evaluating wine, by consumers, sensitive palate, well-trained taste memory, organoleptic method, supplement each other, characteristics of a wine, alcohol content, methods of describing wines.

3 Match the words on the left with the words or expressions on the right.

method	proportion
application	result, outcome
characteristic	produce, output
product	use
sensitive	feature, peculiarity
description	manner, way, means
conclusion	explanation
content	delicate

4 Find the explanations for the following words.

variety, identification, taste, palate, smell, evaluate, effervescence, standard, sight

1. The quality or state of being different or diverse. 2. The recognition that it exists, is important, or is true. 3. The sensation of flavor perceived in the mouth and throat on contact with a substance. 4. The top part of the inside of your mouth. 5. The ability that your nose has to detect things. 6. Form an idea of the amount, number, or value of. 7. Giving off bubbles (of a liquid). 8. A level of quality or achievement, especially a level that is thought to be acceptable. 9. The faculty or power of seeing.

5 Translate the following text using vocabulary below.

Wine expertise

As we all know, preference or liking of a wine is influenced by many factors in addition to wine flavor itself. Some examples are price, grape variety, origin, expert recommendation, winery reputation, winemaker reputation, bottle appearance, health or ethical connotations, and awards received. The goal of this study was to examine differences in preferences among subjects according to two additional factors suspected to also influence quality perception: degree of wine knowledge and sensory expertise or sensory acuity.

Rather than assuming that some subjects were experts and some others novices for each of these two factors, the authors developed two types of tests specifically designed to objectively measure each type of talent: a Wine Trivia Quiz-to measure wine knowledge- and a Smell Association Test- to measure

sensory expertise. Once the subjects were segmented into groups according to one or the other criteria- or both together. This allowed the authors to study the preference of each group, based on their wine knowledge or their sensory acuity.

This is how Wine Trivia Quiz worked. It consisted of 11 wine questions of varying levels of difficulty.

Vocabulary

preference	[prɛfərəns]	Նախապատվություն
flavour	[flævər]	համ
winery reputation	[wajnrɪ rɛpjətɛʃən]	գինու հրակ
connotation	[kənətɛʃən]	իմաստ
goal	[gɔl]	նպատակ
suspect	[səspekʃt]	կասկածել
quality perception	[kwɒləti pɜːsɛpʃən]	որակի ընկալում
pruning	[prunɪŋ]	Էտում
sensory acuity	[sɛnsəri əkjuəti]	զգայական ըմբռնում
assume	[əsumɪŋ]	ենթադրել
novice	[nɒvəsɪz]	Նորեկ

7 Give the summary of the text.

Lesson 6

Vocabulary

liquid	հեղուկ
beverage	խմիչք
enliven	կենսաբար
dissolve	լուծվել
curative	բուժիչ
property	հատկություն
attribute	հատկանիշ
oxygen	թթվածին
retain	պահպանել
excess	ավելցուկ
acid	թթու
tingle	ծակոց, ծակծկոց
effervescent	փրփրուն
charged	լիցքավորված
appreciate	գնահատել
agreeable	Հաճելի, դուրեկան
character	առանձնահատկություն

Champagne and other sparkling wines

Before discussing all types of sparkling wines in particular let us consider the manner in which any liquid containing carbon dioxide came to be used for beverage purposes. As is generally well know, there are a number of places about the globe where effervescent waters issue from the earth more or less charged with carbon dioxide gas. Those living near these sources soon learned to appreciate the agreeable character of these naturally enlivened waters which often had dissolved in them quantity of mineral substances, and which in some instance attracted many health seeking visitors to these areas because of the corrective and curative properties attributed to them. Probably others had done it

before, but it is great Joseph Priestly (1733-1804), discover of oxygen and other gases, who is given credit for making the first artificially carbonated water. He was followed by Speakman, who incorporated carbon dioxide gas into sweet flavored liquids and hence is hailed as the father of our present colossal carbonated beverage industry.

Wines that retain any permanent excess of carbon dioxide are commonly known as “Sparkling”.

There has always been a question as to the amount of carbon dioxide most desirable in beverages. The presence of carbon dioxide gives beverages a slightly acid taste and improves the visible attractiveness. Its bubbling and sparkling produce an agreeable ting on the lips and tongue.

Peter Perignon, Benedictine monk, is generally given credit for the discovery of champagne about three centuries ago. From his experiments a process was obtained for holding indefinitely a carbon dioxide charge produced during the fermentation of the grape in bottle by means of real cork stopper.

1 Find English equivalents for the following in the text.

Փրփրուն գինիների տեսակները: Ածխաթթու գազ պարունակող հեղուկներ: Օգտագործվում են խմիչքներ պատրաստելու նպատակով: Երկրի ընդերքից դուրս եկող փրփրուն ջրեր: Ինչոր չափով պարունակում են ածխաթթու գազ: Գնահատել բնական ջրերի կենսարար լինելու առանձնահատկությունը: Դրանք իրենց մեջ պարունակում են մի շարք հանքային նյութեր: Փրփրուն ջրերի բուժիչ և վերականգնող հատկությունները: Արհեստական գազավորված ջրեր: Թեթև թթու համ: Պղպջակները և թշնջը առաջացնում են հաճելի ծակծկոց շուրթերի և լեզվի վրա:

2 Give Armenian equivalents for the following

Sparkling wines; for beverage purposes; more or less charged with carbon dioxide gas; effervescent waters; agreeable character; naturally enlivened waters; a quantity of mineral substances; health-seeking visitors; corrective and curative properties; artificially carbonated water; sweet flavored liquids; carbonated beverage industry; a slightly acid taste; bubbling and sparkling; agreeable tingling on the lips and tongue; during the fermentation of the grape.

3 Match the words on the left with the words or expressions on the right

purpose	constant, stable
type	delicious, pleasant

sparkling	healing, salutary
amount	kind, sort
permanent	aim, goal, objective
colossal	fizzy, foamy
tasty	number, quantity
curative	characteristic, quality
properties	enormous, gigantic, huge

4 Find in the text the words with the meaning opposite to the following

- 1) Inedible, unappetizing, tasteless; 2) unknown; 3) natural; 4) bitter;
5) temporary; 6) in general; 7) absence; 8) solid; 9) shortage; 10) invisible.

5 Complete the table

NOUN	VERB	ADJECTIVE
		agreeable
desire		
	produce	
		visible
discover		
	attract	
		watery
cure		
	appreciate	

6 Answer the questions

1. What kind of gas are effervescent waters charged with?
2. Why did naturally-enlivened waters attract many health-seeking visitors?

3. Who is given credit for making the first artificially carbonated water?
4. Who is hailed as the father of carbonated beverage industry?
5. Who is generally given credit for the discovery of champagne?
6. Which wines are commonly known as “Sparkling?”
7. What does the presence of carbon dioxide give beverages?

7 Summarize the text

Lesson 7

Vocabulary

ordinary	տեսակավոր
desert	աղանդերային
colouring matters Syn.dying agents	ներկանյութեր
crushed mass Syn.wort	տրորված զանգված
decantation	զտում, քամում
base-titration	տիտրում,
astringent	տոփպ
tanning matter	դաբաղանուկ
lixivate	աղադերացնել
rectified spirit	զատված սպիրտ
gravity feed	ինքնահոս առաքում
moderate	մեղմացնել
antiseptical	հակաբակտերիալ
dye-stuff	ներկանյութ
infusion	թուրմ
extract	դուրս մղել, արտադրել
extractive	հյութալի

Dessert Wines (sweet and strong)

Strong and dessert wines are produced by specific technology devices. The sorts of grapes which are destined for making strong and dessert wines must have high ability to increase sugar in ripening and drying processes, they also must have juice extraction, red sorts of grapes must increase maximum quantity of coloring matters. Depending on producing direction crushed mass is moved to

the flower and on the press, or in a vat or into the concrete reservoirs for infusion. Wort infusion on the soft mass is made in the different periods depending on the direction of wine - making. One of the first stages of wine formation is the process of wort infusion on the soft mass of grape. During infusion the destroyed skin of grape extractive, among them running matters, vitamins, coloring matters, aromatic matters, microelements and a number of other components are lixiviated.

To keep the necessary quality of non-fermented sugar a number of operations are going, among them, adding alcohol in wort which is in the process of fermentation. In this case it is necessary to use rectified spirit which meets the requirements of standard (State Standard 5 9 6 2 5 1). It must be colorless, without any smell and taste. Spirit strength must be not less than 95.5%.

Alcoholization is one of the main operations in wine-making of dessert wines. Thanks to alcoholization wine-maker is able to moderate or to hold up fermentation so that wine material contented necessary amount of sugar. Except antiseptic action alcohol gives particular faint taste, fragrance, lest reduce condition to desirable strength. Alcohol contributes to better extraction of extractive, fragrant, coloring matters of grapes skin.

(ordinary)

"Muskat white" is made of muskat grapes (Echmiadzin district). Grapes are selected during harvesting with saccharine 24% (not less) and acid base-titration 4-5g/dm³. Ready wine is produced with the following conditions: strength-16gen%, sugar-20% and is produced during a year, till next year harvest. Wine is very fragrant, thick, with very pleasant muskat taste and its extractive is completed.

As to their chemical composition, ordinary "muskat" wines do not deeply distinguish from "chateau" wines in their first year. Their color is light gold.

"Kagor". To get "Kagor" they use two technological methods: cold and hot. The latter method is widely used in Armenia. Technological essence of "Kagor" making is the same as during making "Getashen" wine.

Ready wine is produced during one year with the following conditions: strength-16gen%, sugar-16%, acid base-titration 4 g/dm³.

This sort of wine has well obvious cherry and raspberry tones and typical intensive color, very harmonic and astringent taste. Its tasting mark is 8,4-8,6m scores.

"Saperavi" is made of saperavi sort which is dye-stuff (red coloring matters are in the flesh) and is spread on the limited area in Echmiadzin and Armavir districts.

Grapes are harvested with saccharine 12% (not less). They are treated in the crusher that separates stalks from grapes. Soft mass hands over into vats and 80-100 mg/dm³ sulphite anhydride is added and subjected to infusion and partly fermentation. During infusion the vats content is mixed repeatedly (3-4 times). Then soft mass is handed over on the press. Wine wort gravity feed and the first pressing are gathered separately and spiritized. Its strength is brought to 16 gen % with remaining sugar-16%. As wine becomes lighter the first decantation wine materials are brought to the condition

Exercises

1 Find English equivalents for the following in the text

Աղանդերային գինիներ. Հասունացման և գերհասունացման շրջան. Շաքարայնության բարձր տոկոս. Առավելագույն քանակի ներկանյութ արտադրելու հատկություն. Տրորված զանգվածի թրմում. Ջարդված պտղամաշկից արտադրվող նյութեր. դաբաղիչներ, վիտամիններ, ներկանյութեր. Թորած սպիրտ. Ալկոհոլացումը նպաստում է. Խմորման գործընթացի մեղմացում. Պտղամաշկից էսենցիոն, բուրավետ և ներկող նյութերի ավելի լավ անջատում. Երբ շաքարայնությունը հասնում է նվազագույնը 12%-ի. Մամլիչը պտուղը անջատում է ողկույզից. Ջանգվածի մեջ ավելացվում է սուլֆատի անհիդրիդ. Խթանում է թրմելու գործընթացին. Առաջին մամլումից ստացված գինեկյութ. Գինին բուրումնավետ է, խիտ և ունի շատ հաճելի մուսկաթի համ. Մուսկաթ գինին լինում է բաց ոսկեգույն. Օգտագործում են երկու մեթոդ՝ սառը և տաք. Գինիները ունենում են բալի կամ մորու գույն. Ակնհայտ տոնիկ համ:

2 Find Armenian equivalents for the followings in the text.

Crashed mass; reservoirs for infusion; ability to increase sugar; ripening and drying processes; juice extraction; coloring matters; soft mass; aromatic matters; requirements of standard; without any smell and taste; one of the main operations; thanks to alcoholization; particular faint taste.

3 Match the words and arrange them in pairs.

1) desirable 2) ripen 3) press 4) crash 5) infusion 6) faint 7) aromatic 8) taste 9) standard 10) antiseptic

1)mature 2)squeeze 3)smash 4)flavor 5)fragrant 6)injection 7)insufficient
 8)pleasant 9) sanitary 10) criterion

4 Find the explanations for the following words

Technology, aromatic, smell, taste, standard, extraction, fermentation, antiseptic, infusion, wort.

1) the sweet infusion of ground malt or other grain before fermentation, used to produce beer and distilled malt liquors. 2) the application of scientific knowledge for practical purposes, especially in industry. 3) the faculty or power of perceiving odors or scents by means of the organs in the nose. 4) the chemical breakdown of a substance by bacteria, yeasts, or other micro-organisms, typically involving effervescence and the giving off of heat. 5) having a pleasant and distinctive smell. 6) the first thing is added to the other thing and makes it stronger or better. 7) the action of taking out something, esp. using effort or force. 8) preventing the growth of disease-causing micro-organisms. 9) the sensation of flavour perceived in the mouth and throat on contact with a substance. 10) a level of quality or achievement, especially a level that is thought to be acceptable.

5 Complete the table

NOUN	VERB	ADJECTIVE
alcohol		
	infuse	
		ripe
fermentation		
	extract	
		moderate

6 Answer the questions

1. How are strong and dessert wines produced?
2. What must the sorts of grapes have which are destined for making dessert wines?

3. What is the main operation in dessert wine making?
4. What is lixiviated during infusion?
5. What is done to keep the necessary quantity of non-fermented sugar?
6. What is alcoholization?
7. What does alcohol contribute to?

Lesson 8

Vocabulary

cognac	կոնյակ
distillation	թորում
barrel	տակառ, տակառիկ
enamel	արծնապակի, արծնապատել, Էմալով ծածկել
plunge	ընկղմել, սուզել
blending syn revision	խառնում, կուլպաժավորում
muff	մուֆտա (հարվածող սարք)
wine material	գինեկուլթ
cognac alcohol	կոնյակի սպիրտ
grape alcohol	խաղողի սպիրտ
thorough	հիմնավոր

Cognacs

Cognac has received its name from the French town Cognac, department Sharant. That is why according to the French legislation only cognac made in this department can carry this title. Cognac is a strong alcohol drink, which is remarkable of its particular pleasant fragrance.

It is made of grape alcohol by means of distillation of grape wine.

Cognac alcohol in Armenia is produced at the following factories situated in the zone of Ararat valley: Armavir cognac factory, Aygevan cognac factory, Burastan wine-cognac factory, Ararat wine factory. Cognac alcohol is kept in the barrels and enamel reservoirs with plunged pieces of oak wood or in the oak barrels.

Cognac alcohol after appointed keeping is delivered to the Yerevan cognac factory where alcohol is subjected to tasting and selected according to the quality (for producing ordinary sorts and blending for chateau cognacs.)

Cognac preparation is a very difficult process and according to the technology it includes the following processes.

-producing of cognac materials;

-distillation of wine material and receiving cognac alcohol;

-blending: thorough revision and decantation of ready product into bottles.

For manufacturing of cognac materials the sorts of grapes are permitted which haven't specific fragrance and intensive colored juice.

From this point of view in Armenia are distinguished the following sorts: Mskhali, Voskehat, Garandmak, Katsiteli, Kakhet, Masis, Asateni, Megrabuir.

Grapes destined for thorough revision for cognac wine material must be ripe and healthy according to the technology.

Grapes are picked with saccharine of 15 to 20%. Thorough revision and later care of wine material is done according to the technology rules.

Young material which has strength of 8-10% and acid base-titration not less than 4,5 g/sm³ is sent for distillation after fermentation and the first decantation.

Distillation of young wine materials for cognac alcohol is realized in November-December from the year's harvest and lasts till May of the next year. Distillation of wine materials to cognac alcohol is made in the apparatus of double or single muff.

Exersices

1 Give English equivalents for the following

Կոնյակն իր անվանումը ստացել է Այդ տարածքում արտադրվող կոնյակը. Կարող է կրել այդ անվանումը. Կոնյակը թունդ ակահոլային խմիչք է. Յուրահատուկ հաճելի համով. Պարտաստվում է գինեկոթի թուրմից ստացվող սպիրտի. Ալկոհոլը համտեսվում է և զատվում ըստ որակի. Կոնյակի ստացումը ներառում է հետևյալ գործընթացները. Գինեկոթի ստացում. Գինեկոթի թորում և կոնյակի սպիրտի ստացում. Կոնյակի սպիրտի հնեցում՝ կաղնու տակառներում. Պատրաստի արտադրանքի կուպաժ և շշալցում:

Կոնյակի արտադրության համար նախատեսված խաղողը չպետք է ունենա յուրահատուկ համ և գունավոր հյութ: Գինեկոթի հիմնավոր խառնումը կամ կուպաժը և հետագա խնամքը կատարվում է ըստ տեխնոլոգիական կանոնների:

Երիտասարդ կոնյակը ուղարկվում է թորման խմորումից և առաջնային գտումից հետո:

Գինենյութի թորումը կոնյակի սպիրտ ստանալու նպատակով իրականացվում է նոյեմբեր-դեկտեմբեր ամիսներին և տևում է մինչև մայիս ամիսը:

2 Give Armenian equivalents for the following

According to the French legislation; can carry this title; strong alcohol drink; by means of distillation; is kept in the barrels; enamel reservoirs; oak wood; selected according to the quality; according to the technology; thorough revision; specific fragrance; grapes must be ripe; decantation of ready product; blending; wine material; grape alcohol

3 Find the explanations for the following words:

thorough, barrel, blend, harvest, production, select, ordinary

- 1) with no special or distinctive features; normal.
- 2) complete with regard to every detail; not superficial or partial.
- 3) a cylindrical container bulging out in the middle, traditionally made of wooden staves with metal hoops around them.
- 4) the action of making or manufacturing from components or raw materials, or the process of being so manufactured.
- 5) carefully choose as being the best or most suitable.
- 6) mix (a substance) with another substance so that they combine together.
- 7) the process or period of gathering in crops

4 Make up correct word-combinations out of the following and translate them. Make up your own sentences with them.

1.strong	material
2.difficult	revision
3.oak	barrels
4.pleasant	fragrance
5.ordinary	sorts
6.grape	process
7.thorough	alcohol
8.wine	drink

5 Answer the following questions

1. What is cognac?
2. Where has cognac received its name from?
3. Where is cognac alcohol kept?
4. What processes does cognac preparation include?
5. Which sorts of grapes are permitted for manufacturing of cognac materials?
6. When is young wine material sent for distillation?
7. When is young wine material distillation realized?

Lesson 9

Vocabulary

brandy	օղի
Syn. vodka	
dilute	ավելացնել
ether-oil	էթերային յուղ
raw material	հումք
insignificant	աննշան
bitter	դառը
shade	երանգ
burning	այրող
constituent parts	բաղադրիչ մասեր
sour	թթու
inherited	ժառանգված
cordial	ոչ ակոհողային սիրոպ

Liqueur and vodka goods

Alcohol drinks which have specific taste and fragrance are called liqueur-vodka goods. They are liqueurs. For preparing liqueur-vodka goods three components are used: fruits and berries, ether-oil and non fragrance plants. To fruit and berry raw materials are related fruits and berries having a great content of extract substances and as well as sugar and acids insignificant quantity.

To the ether-oil raw materials belong grasses roots containing tanning matters and coloring matters. Along with plants raw material sugar, organic acids and synthetic substances are used to form necessary tasting and fragrant features of liqueur-vodka goods.

Liqueurs are divided into 2 groups: bitter and sweet. Bitter liqueurs contain 35-45% of alcohol and they use sugar in insignificant quantity to make liqueurs taste softer. They are made on the basis of ether-oil and brown tones of different shades. They have bitter taste with different shades (from soft to burning and astringent).

Sweet liqueurs contain from 18 to 24% of alcohol. Sugar content ranges within 8-35% but for more sorts it contains 24-28%. These liqueurs are prepared of fruit and berry raw material and essence, ether-oil, port wine, cognac and other constituent parts.

These liqueurs are colored in yellow and red tones inherited in berries from which these liqueurs are prepared. They have sour and sweet taste of fruits and berries as well as bitter taste with different shades.

In the United States and Canada, where spirits are often called "liquor" (pronounced /'lɪkər/, with stress on the first rather than the second syllable), there is often confusion over liqueurs and liquors, especially as many spirits today are available in flavored form (e.g. flavored vodka). The most reliable rule of thumb is that liqueurs are quite sweet and often syrupy in consistency, while liquors are not. Most liqueurs have a lower alcohol content (15-30% ABV) than spirits, but some contain as much as 55% ABV.

In parts of the United States, liqueurs may also be called cordials or schnapps, while in large parts of the British Commonwealth, cordial means a concentrated non-alcoholic fruit syrup that is diluted to taste and consumed as a non-carbonated soft drink, and in Germany and Scandinavia, schnapps means a form of brandy or aquavit.

Exercises

1. Find English equivalents for the following in the text:

Լիկյոր-օղի սպիրտային խմիչքներ. Ալկոհոլային խմիչքներ. Ունեն յուրահատուկ համ և հոտ. Օգտագործվում են մրգեր կամ հատապտուղներ. Եթերային յուղ և ոչ հոտավետ բույսեր. Բուրունավետ նյութեր. Լիկյորին տալիս են համ. Եթերային յուղի համար հումք են ծառայում խոտերն ու արմատները. Պարունակում են դաբաղիչներ և ներկանյութեր. Օրգանական թթուներ և արհեստական նյութեր. Բաժանվում են երկու խմբի՝ դառը և քաղցր. Դառը լիկյորները ունենում են շագանակագույնի տարբեր երանգներ. Քաղցր լիկյորները լինում են դեղին և կարմիր երանգների. Ըստ համապատասխան պտուղների, որից պատրաստվել են դրանք:

2. Give Armenian equivalents for:

specific taste; inherited in berries from which they are prepared; bitter taste of different shades; sugar content ranges; a great content of extract substances; they use sugar in insignificant quantities; on the basis of ether-oil; bitter overtaste.

3. Match the words and arrange them in pairs.

- | | | | |
|---------------|------------------|----------------|-------------|
| 1. individual | 2. insignificant | 3. contain | 4. rang |
| 5. raw | 6. synthetic | 7. substance | 8. use |
| 1. comprise | 2. vary hesitate | 3. unprocessed | 4. personal |
| 5. small | 6. artificial | 7. flavour | 8. apply |

4 Complete the table

NOUN	VERB	ADJECTIVE
density		
		qualified
	damage	
benefit		
		effective
	relate	

5 Find the explanations for the following words

Substance, property, curative, liquid, agreeable, oxygen, bubble, fermentation.

1. The chemical breakdown of a substance by bacteria, yeasts, or other microorganisms, typically involving effervescence and the giving off of heat.
2. Quite enjoyable and pleasurable.
3. An attribute, quality, or characteristic of something.
4. A particular kind of matter with uniform properties.
5. A substance that flows freely but is of constant volume, having a consistency like that of

water or oil. 6.Small balls of air or gas in a liquid. 7.Able to cure something, typically disease. 8. A colorless gas that exists in large quantities in the air. All plants and animals need it in order to live.

6. Answer the questions:

1. What is used for preparing of liqueur-vodka goods?
2. What belongs to ether-oil raw materials?
3. According to what are liqueur-vodka goods divided into three groups?
4. What is used in making bitter liqueurs?
5. Why are liqueurs colored in yellow and red tones?
6. How do the liqueurs taste?

7. Summarize the text.

Lesson 10

Vocabulary

ancestor	Նախահայր
archeologist	հնետաբան
nucleus(pl.nuclei)	միջուկ, կորիզ
complicate	բարդացնել, դժվարացնել
confirm	հաստատել, վավերացնել
hypothesis(pl. hypotheses)	վարկած
tare	տարա
troop	խումբ
interaction	փոխազդեցություն
reveal	բացահայտել, ցույցտալ
deny	հերքել, ժխտել
toil	աշխատել (դժվար աշխատանք կատարել)
pomegranate	նուռ
flood	ջրհեղեղ
slop	թափվել
excavation	պեղումներ

Wine making in Armenia

Talking about the country of wine and the history of wine-making in Armenia it should be mentioned that according to the Biblical legend, the winemaking dates back to the grape planted by Forefather Noah in the slope of Mount Ararat (Bible, Genesis 8:3, 4; Genesis 9:20, 21).

The wine was a reward for Noah and for his companions for all the sufferings that they overcame during the great flood. According to the scientifically proven facts, winemaking in Armenia has 6 thousand years history. Archeologists have found nuclei of grapes in Armenia, which being put in number of complicated analysis have confirmed the hypothesis, that winemaking in Ararat Valley has centuries old history. Many tares and winemaking equipments with wine remains and grape nucleus have been found in the caves near Areni village. These studies about the history of winemaking in the Old World have been done by a group of Armenian, American and Irish people. The Armenians were the first who were engaged in wine exporting.

Armenia has long been famous for its wine-makers, which unique traditions have been preserved till today. This can even be notified from such philosophers, such as Herodotus and Strabone. In 401-400 BC, when the Greek troops led by Ksenofon were passing through the country Nairi (the ancient name for Armenia), in their homes they were treated by beer and wine, those wines were stored in deep underground storages in special clay jars.

In 19-20th centuries the excavations done by academician Petrovski confirmed the fact that this country which got a birth in 9th BC and located in the interaction of The East and The West was a developed wine-making country. It is proved by archeologists who revealed more than 2500 years old wine storage with 480 jars in Red Hill castle (Teyshbaini), where could have been saved for about 37 thousand decalitre wine.

The ancestors of Armenians, who were the inhabitants of Urartu, one of the ancient States of the world, were occupied with viticulture. In the chronologies were preserved statements about that ancient country where special attention was given to the viticulture and fruit-growing. In the historical information were mentioned various technological methods of wine and beer preparation. Wine production traditions have been carefully preserved for many years. It is impossible to deny the fact that even today many villagers as 3 millennia ago are reprocessing grape and get wine in special buildings as wine-press. And the land, which is famous for its hardworking inhabitants and the people who toil very hard, with its apricot odor and soft tune of duduk, with its red pomegranate and with its mountains flooded by sun is called Armenia.

1 Put questions to the text and answer them.

2 Use the verbs in the correct tense form.

1. The variety of grape used to make a wine fundamentally (determine) the wine's taste. 2. Wine (be) a reward to Noah and his fellow travelers for all the sufferings that they (overcome) during the Flood. 3. Annually up to 6 million bottles of wine (produce). 4. Wine (accompany) ancient people during their whole life and when they (see) people off to the next world a jug of wine (be) sent with the dead person. 5. The recent studies (show) that men should drink 2-3 glasses of wine per day, women – two times less. 6. The arrival of the Arabs in the 8th century (slow) the development of winemaking in Spain as the Koran (prohibit) the consumption of fermented and alcoholic drinks. 7. Cabernet Franc (recognize) in the Bordeaux area by the end of the eighteenth century near Libourne. 8. In the year 2002, 595 million gallons of wine (sell) in the United States, totaling about \$21.1 billion in consumer spending.

3 Find corresponding words and arrange them in pairs as in the example.

technology	wines
dessert	devices
coloring	material
wine	matters
tanning	spirit
rectified	mass

4 Choose the word that best completes the sentence.

1. Receiving grapes are treated in the crusher that separates -----from grapes.

Stalk-hackle-cluster

2. Alcohol contributes to better extraction of extractive, fragrant, coloring -----of grapes skin

Matter-agent-substance

3. Except antiseptic action alcohol gives particular faint taste,-----, lest reduce condition to desirable strength.

Fragrance- aroma-smell

4.----- infusion on the soft mass is made in the different periods depending on the direction of wine - making.

Wort-crushed mass

5 Fill the gaps with the missing words, make changes if necessary.

There are some very basic ----- to keep in mind when you uncork a wine. For red wines, you should ----- the cork about an hour before you ----- it. The oxidation ----- will shape the bouquet of the wine and help you discern the full -- ----- of the vintage. The expression "let it breathe" certainly fits here. Indeed, you may also decant the ----- to help it breathe, but more on that later.

White wines tend to diminish in ----- the longer you keep the bottle ----- at room temperature. Uncork just before you ----- to your guests.

Flavour, to serve, to drink, rule, open, process, wine, to remove, quality

6 Summarize the text.

Glossary of food technology

Additives: substances added to food to aid processing, preservation, to improve flavour or colour.

Adulteration: the adding of cheaper, inferior or less desirable materials to a food.

Aerobic: requires oxygen.

Aseptic: without contamination by micro-organisms, i.e. sterile.

Anaerobic: does not require oxygen.

ANZFA: Australia New Zealand Food Authority.

Aseptic packaging: is a system wherein the food product and the container are sterilised separately, and the containers are filled and sealed in a sterile environment.

Automated: a system where machines handle and control the processing from raw materials to the finished product.

Bacteria: a large group of single-celled micro-organisms which can be both harmful and helpful to food.

Blanching: process of immersing in hot water or heating in steam at 95°C for 1-5 minutes to reduce enzyme activity.

Centrifugation: a process by which liquid samples are spun around at high speed to cause the accelerated settling of particles in suspension.

Chemical inertness: substances or elements which do not react easily with any other substances or elements. Chemically inactive materials.

Co-extrusion: (or Co-ex film) is a multi-layer plastic film made by extruding two or more molten plastics and layering them together to produce a film on cooling. They are designed for many special-purpose packaging for flexible wraps, bags and pouches.

Consumer: any person who uses goods and services.

Contamination: a process by which harmful or unpleasant substances (such as strong odours, bacteria or poisons) get into or onto food.

Conventional cook-chill: this is when foods are cooked by conventional methods prior to aseptic packaging and chilling. These foods can be refrigerated for up to five days.

CPET: crystallised polyethylene terephthalate: a type of plastic suitable for microwave packaging. It is heat resistant to 220°C and transparent to microwave energy.

Degradability: the ability of materials to be broken down.

Dehydration: removal of water from the tissues of an organism.

Demographic: vital and social statistics concerning the population including distribution, ethnic background, marriage rates, birth rates, etc.

Ecological: to do with a branch of science which investigates the relationships among living things and their surroundings.

Effluent: liquid industrial waste.

Embargoes: bans placed on the importation of a particular product.

Emissions: discharge released into the atmosphere from processing.

Emulsifiers: substances which allow the mixing of two or more immiscible liquids (two liquids that don't mix together such as oil and water) to form a stable emulsion. Emulsifiers work by coating the surface of droplets of one liquid in such a way that they can stay dispersed in the second liquid.

Enzymes: chemical substances that act as catalysts in chemical reactions.

Evaporation: the loss of molecules from a liquid or solution as vapour.

Extrusion: forcing a viscous solution through a spinneret-like machine (similar to a shower head).

Filtration: the process of passing a liquid through a filter to remove any solid particles.

Flow diagram: (sometimes referred to as flow charts) links the sequence of processing operations as a series of units.

Food irradiation: a high-energy ionising radiation process used to preserve foods.

Food processing: using food as a raw material and changing it in some way to make a food product.

Food retailing: businesses where the consumer can buy food products.

Functional foods: foods that not only provide the expected nutrients, but also have a positive impact on health in either a curative or preventative manner.

HACCP: hazard analysis of critical control points; a quality management system that identifies critical points in production and sets up measures to ensure nothing to affect the safety of the product happens at these points.

Heat sealing: a method of sealing plastic containers by heating two adjoining layers or portions of the container until they melt together thereby forming a good seal.

HDPE: high-density polyethylene.

Hermetic: the sealing of a package that forms a closure that is absolutely impervious to micro-organisms, gas, water molecules and dust.

Homogenise: the process in which the size of the fat globules is reduced to small uniform particles, which are then distributed evenly throughout the liquid. For example, the cream in homogenised milk is distributed throughout the liquid rather than rising to the top to form a layer.

HTST: high temperature/short-time processing. A process by which food is sterilised at very high temperatures but only for a very short period.

Industrialisation: use of mechanisation and automation technology.

Immigration: the movement of people from one country, to live in another country.

Impervious: forms an impassable barrier.

Laminate: to combine two or more layers of material to form packaging. The layers are held together by an adhesive or heat bonding.

Legislation: law passed by parliament.

MAP: (Modified atmosphere packaging) is the term used for methods that will help to maintain the quality of a food product by changing the atmosphere inside its retail package. For example, reduce the availability of oxygen or manipulate the levels of carbon dioxide. It produces a gas mix to maximise shelf life.

Micro-organisms: organisms which are very small, usually containing only one cell and which cannot be seen by the human eye.

Moulds: a group of multi-cellular fungi which grow in thread-like strands called hyphae. Moulds can grow on foods and damage them but some are introduced into foods to give added flavour, e.g. in some cheeses.

Multiculturalism: a policy and a set of strategies of State and Commonwealth governments of the 1970s to encourage cultural diversity and tolerance in society.

Niche: a small and specialized market.

NHMRC: National Health and Medical Research Council.

Organic farming: food produced without the use of synthetic chemicals and with concern for the environment.

Palatability: pleasant to taste, being acceptable.

Pasteurisation: is a process designed to destroy pathogenic bacteria in liquid foods by using high temperatures. Milk is sterilised by holding it at a high temperature for a period of time.

Pathogenic: harmful to the human body.

Perishable: having a short shelf-life; food that spoils quickly and needs careful storage.

Pesticides: chemicals used to kill pests.

PET: polyethylene terephthalate, a light-weight clear plastic with acceptable barrier properties to gas and water vapour.

Preservation: any process used to slow or stop the progress of spoilage. It allows easier distribution and transport and the food can be stored for longer before use.

Primary production: plants and animals produced by the agricultural and fisheries sector.

Processing: treating a food in such a way as to change its nature and properties in order to preserve it, to improve its eating quality or to make useful ingredients.

Recycled: to use again.

Retailer: sells goods or services to the consumer for personal use.

Scavengers: materials that remove gases from packaging including oxygen scavengers, ethylene scavengers, carbon dioxide scavengers and water vapour absorbents.

Shelf life: the expected length of time a food will maintain its best quality.

Sous vide: a process in which food is prepared, vacuum packed, cooked to pasteurise (sterilise) the food and chilled. These foods can be refrigerated for up to sixty days.

Specific-purpose foods: foods produced for a specific purpose such as, to supply military personnel, for space explorations, to supply food for areas of temperature extremes or to supply high-protein biscuits for famine areas, and more recently, foods developed for a more specific health purpose in the general population.

Stabilisers: substances which allow food compounds which do not mix well to be mixed and stay in a homogeneous state.

Sterilisation: a process in which foods are treated to kill all forms of micro-organisms and spores. Foods can be sterilised with high temperature treatment or with ionising radiation.

Sublimation: to change, when heated, from a solid state to a vapour without going through the liquid state.

Susceptors: are strips of material, usually metallised polyester film/paper laminate, attached inside a microwave package to concentrate heating over the foods that need to be browned. A de-metallising process applied to the laminate is able to remove different amounts of the metal to ensure even cooking for different components or for different areas of a product.

Tamper evidence: devices attached to food packages that indicate if a package has been opened or not.

Tariff: a tax imposed on imported goods.

UHT: ultra high temperature.

Vacuum: a place or region containing no solid, liquid or gas.

Value-added: the processing of products so that their selling price is higher than that of the raw materials from which they were made.

Yeasts: single-celled fungi which reproduces by budding.

Expressions of quantity

A bag of: a bag of potatoes, a bag of oranges, a bag of dog food, a bag of potato chips;

A bar of: a bar of chocolate, a candy bar, a bar of soap;

A bottle of: a bottle of milk, a bottle of mineral water, a bottle of grapefruit juice, a bottle of red wine, two bottles of beer, a bottle of ketchup, a bottle of soy sauce;

A bowl of: a bowl of breakfast cereal, a bowl of cornflakes, a bowl of salad, a bowl of soup;

A box of: a box of spaghetti, a box of corn flakes, a box of crackers, a box of cookies, a box of chocolates, a box of matches;

A bunch of: a bunch of parsley, a bunch of carrots, a bunch of radishes, a bunch of flowers;

A can of: a can of green peas, a can of olives, a can of tomato soup, a can of sardines, a can of beer, a can of hair spray;

A carton of: a carton of milk, a carton of fruit juice, a carton of eggs, a carton of cigarettes (ten packs of cigarettes);

A container of: a container of sour cream, a container / a cup of yogurt;

A cup of: a cup of coffee, a cup of tea, a cup of soup, a (plastic) cup of coffee;

A dozen (of): a dozen eggs, two dozen eggs, a dozen oranges, a dozen of hamburger rolls;

A gallon of: a gallon of milk, a gallon of spring water;

A glass of: a glass of milk, a glass of beer, a glass of wine;

A head of: a head of cabbage, a head of cauliflower, two heads of garlic;

A jar of: a jar of coffee, a jar of mayonnaise, a jar of raspberry jam, a jar of pickles;

A loaf of: a loaf of bread, a loaf of French bread, two loaves of rye bread;

A mug of: a mug of beer, a mug of coffee;

A package of: a package of hot dogs, a package of chicken legs, a package of sesame rolls, a package of cookies, a package of cottage cheese, a package of popcorn, a package of beans, a package of candies;

A pack of: a pack of chewing gum, a pack of cigarettes, a pack of cards; a six-pack of beer, a twelve-pack of mineral water, a twin pack;

A piece of: a piece of bread, a piece of cake, a piece of pie, a piece of fruit;

A pint of: a pint of blueberries, a pint of cream, a pint of beer;

A pound of: a pound of meat, three pounds of ground beef, a pound of cheese, a half pound of butter, two pounds of tomatoes;

A quart of: a quart of milk, a quart of apple juice, two quarts of orange juice;

A roll of: a roll of toilet paper, a roll of paper towels, a roll of foil, a roll of film;

A slice of: a slice of bread, a slice of pie, a slice of pizza, a slice of cheese, a slice of meat; a slice of tomato;

A teaspoon of: a teaspoon of instant coffee, a teaspoon of syrup; a tablespoon of salt;

Sugar: a lump of sugar; two lumps of sugar; a cube of sugar; a teaspoon of sugar; a spoonful of sugar;

A tube of: a tube of mustard, a tube of hand cream, a tube of shampoo, a tube of toothpaste;

One, two, five: two fish, four salmon steaks, five frozen hamburgers, three cinnamon buns, six oranges.

Weight

1 ounce (oz.) = 28.35 grams (g)

1 pound (lb.) = 16 ounces = 453.6 grams

2.2 pounds = 1 kilogram (kg)

Liquid

1 pint (pt.) = 0.473 liters (L, l)

1 quart (qt.) = 2 pints = 0.946 liters

1 gallon (gal.) = 4 quarts = 3.785 liters

Meat – Мясо-Միս

beef	говядина	տավարի միս
pork	свинина	խոզի միս
chicken	курятина	հավի միս
bacon	пирог со свиной	բեկոն
ham	ветчина	վետչինա
lamb	мясо молодого барашка; ягненок	գառան միս
liver	печёнка	լյարդ
kidneys	почки	երիկամ
turkey	индейка	հնդկահավ
duck	утка	բադ
sausages	колбасы; сосиски	երշիկ, նրբերշիկ
cooked meat	жареное мясо	տապակած միս
salami	Салами	սալամի
pork pie	бекон	խոզի մսով կարկանդակ

Fruit – Фрукты-Միրգ

apple	яблоко	խնձոր
orange	апельсин	նարինջ
banana	банан	ադամաթուզ
pear	груша	տանձ
peach	персик	դեղձ
lemon	лимон	լիմոն, կիտրոն
lime	лайм	լայմ
plum	слива	սալոր
melon	дыня	սեխ
grape	грейпфрут	թուրինջ

mango	манго	մանգո
kiwi fruit	киви	կիվի
apricot	абрикос	ծիրան
pineapple	ананас	արքայախնձոր
blackberry	черника	սևամորի
black currant	чёрная смородина	սևհաղարջ
red currant	красная смородина	կարմիր հաղարջ
blueberry	голубика	հապալաս
strawberry	клубника	ելակ
raspberry	малина	ազևվամորի
gooseberry	крыжовник	փշահաղարջ
rhubarb	ревень	խավարծիլ

Fish – Рыба -Ձուկ

cod	треска	ծողածուկ
plaice	пикша (род трески)	իշածուկ
tuna	тунец	թյուննոս
salmon	лосось; сёмга	սաղմոն
trout	форель	իշխան
mackerel	макрель; скумбрия	սկումբրիա
herring	сельдь, селёдка	ծովատառեխ
sardine	сардина	սարդինածուկ
pilchard	сардина	սարդինա
anchovy	анчоус	անծրուկ
kipper	копчёная рыба (особ. селёдка)	ապխտած ձուկ
smoked salmon	копчёный лосось	ապխտած սաղմոն

Vegetables – Овощи-Բանջարեղեն

tomato (plural: tomatoes)	помидор	լոլիկ
avocado	авокадо	ավոկադո
pepper	перец	պղպեղ
turnip	репа	շաղգամ
potato (plural: potatoes)	картофель	կարտոֆիլ
peas	горох	սիսեռ
carrot	морковь	գազար
onion	лук	սոխ
celery	сельдерей	նեխուր
cabbage	капуста	կաղամբ
broccoli	броколи	բրոկոլի
cauliflower	цветная капуста	ծաղկակաղամբ
brussels sprouts	брюссельская капуста	բրյուսելյան կաղամբ
broad beans	(кормовые) бобы	լայն լոբի
runner beans	стручковая фасоль	լոբի
French beans	фасоль	ֆրանսիական լոբի
aubergine	баклажан	բադրիջան
sweetcorn	кукуруза	եգիպտացորեն
spring onion	лук-батун; зелёный лук	կանաչսոխ
mushroom	гриб	սունկ
cucumber	огурец	վարունգ

Dairy products - Молочные продукты-Կարնամթերք

milk	Молоко	կաթ
full-fat milk	цельное молоко	անարատ կաթ
semi-skimmed milk	полужирное молоко	կիսայուղալի կաթ
skimmed milk	обезжиренное молоко	յուղազուրկ կաթ
eggs	яйца	հավկիթներ
butter	масло	կարագ
margarine	маргарин	մարգարին
cream	сливки	սերուցք
sour cream	сметана	թթվասեր
cheese	сыр	պանիր
matsoun	мацони	մածուն
yoghurt	йогурт	յոգուրտ

Bread, cakes - Хлеб, пироги - Դաշ, Տորթեր

white bread	белый хлеб	սպիտակ հաց
brown bread	чёрный хлеб	տարեկանի, սև հաց
bread rolls	булочки	բուլկի
baguette	багет, французский батон	ֆրանսիական բատոն
loaf	булка; буханка	բոքոն
sliced loaf	нарезанная булка	կտրատած բոքոն
pitta bread	пита	պիտա
plain flour	мука	այլուր
self-raising flour	мука с добавлением разрыхлителей	փխրեցուցիչով այլուր
pastry	кондитерские изделия	խմորեղեն

Otherfoods - Ըրրրր քրրրրր քրրրրր-Այլ սննդամթերք

sugar	սաքար	շաքար
salt	սօլ	աղ
pepper	քերե	պղպեղ
vinegar	սքսս	քաքախ
ketchup	քեչսք	կեռչոսպ
mayonnaise	մայօնե	մայոնե
mustard	քորչր	մանանեխ
spices	սքեքր	համեմոլեքներ
garlic	չեսօք	սխտոր
chilli	չրլր; քրասնր քերե	կարմիր պղպեղ, չիլի
curry powder	քարր	կարրի
pasta	քասթա	մակարոնեղեն
pasta sauce	քօժրրա ժրր քասթա	մակարոնեղենի թաքան
spaghetti	սքաքեթթր	սպաքեթի
pizza	քրքս	պիքքա
rice	րրս	բրինձ
noodles	լաքսա	արիշտա

Snacks – Զաքսք-խրրրրիկներ

nuts	օրեքր	ընկոլքեղեն
olives	օլրրքր	ձիթապտոռլ
crisps	չրքսք	ձողրկներ, չիպս
chocolate	շօքօլաժ	շոկոլաթ
sweets	սքաժօթր	քաղքրալենիք
biscuits	քեչենք	թխվաժքաբրիթներ

sage	шалфей	եղեսպակ
thyme	тимьян	ուրց
rosemary	розмарин	խնկունի, ծիտրոն
parsley	петрушка	մաղաղանոս
dill	укроп	սամիթ
basil	базилик	ռեհան
chives	лук-резанец	մանրսոխ
coriander	кориандр	համեմի սերմ

Alcoholic drinks – Алкогольные напитки – Ալկոհոլային խմիչքներ

lager	лёгкое пиво	թեթև գարեջուր
wine	вино	գինի
red wine	красное вино	կարմիր գինի
white wine	белое вино	սպիտակ գինի
rosé	розовое вино	վարդի գինի
whisky / whiskey	виски	վիսկի
rum	ром	ռոմ
gin	джин	ջին
brandy	бренди	կոնյակ
liqueur	ликёр	լիկյոր
vodka	водка	օղի
cider	сидр	խնձորօղի
champagne	шампанское	շամպայն
bitter	горькое пиво	դառը գարեջուր

Cold drinks –Холодные напитки-Մառը ըմպելիքներ

fruit juice	фруктовый сок	մրգային հյութ
orange juice	апельсиновый сок	նարնջի հյութ
pineapple juice	ананасовый сок	արքայախնձորի հյութ
tomato juice	томатный сок	լոլիկի հյութ
lemonade	лимонад	լիմոնադ
cola / coke	Кола	Կոլա
squash	фруктовый напиток	մրգային ըմպելիք
iced tea	холодный чай	սառույցով թեյ
milkshake	молочный коктейль	կաթնային կոկտեյլ
water	вода	ջուր
still water	вода без газа	չգազավորված ջուր
sparkling water	газированная вода	գազավորված ջուր
mineral water	минеральная вода	հանքային ջուր
tap water	вода из-под крана	ծորակի ջուր

Hot drinks - Горячие напитки - Տաք խմիչքներ

tea	чай	թեյ
coffee	кофе	սուրճ
cocoa	какао	կակաո
hot chocolate	горячий шоколад	տաք շոկոլադ

Cattle – СКОТ – Ագարակային կենդանիներ

cow	корова	կով
sheep (<i>plural:</i> sheep)	овца	ոչխար
goat	козёл; коза	այծ
horse	лошадь	ծի
cattle	крупный рогатый скот	խոշոր եղջերավոր անասուն
pig	свинья	խոզ
hen	курица	հավ
bull	бык	ցով
goose (<i>plural:</i> geese)	гусь	սագ
duck	утка	բադ
calf	телёнок	հորթ
lamb	ягнёнок, барашек; овечка	գառ
kid	козлёнок	ովիկ
foal	жеребёнок; ослёнок	քուռակ
piglet	поросёнок	խոճկոր
chicken	цыплёнок	ճուտ
bullock	вол	եզ
cock	петух	աքաղաղ
to milk a cow	доить корову	կով կթել

extraction	экстрагирование	առանձնացում լուծամզում
distillation	дистилляция	թորում
centrifugation	центрифугирование	կենտրոնաթապում
canning	консервирование	պահածոյացում
chemical processing	химическая обработка	քիմիական մշակում
pickling	маринование	մարինացում
drying	сушка	չորացում
salting	посол	աղադրում
dehydration	обезвоживание, сушка	ջրազրկում
preservation	консервирование	կոնսերվացում
fermentation	ферментация	խմորում
irradiation	облучение	ճառագայթում
chilling	охлаждение	պաղեցում
freezing	замораживание	սառեցում
cooling	остывание	հովացում
pasturazation	пастеризация	պաստեռացում
smoking	копчение	ապխտում
thermal processing	термическая обработка	ջերմային մշակում
milling	измельчение	մանրեցում, աղում
saturation	насыщение, сатурация	հագեցում
homogenization	гомогенизация	համասեռում
mixing	замес, смешивание	խառնում
blending	смешивание	խառնում
filtration	фильтрация	քամում
alcoholization	спиртование	ալկոհոլացում

kneading	замес	հունցում
rolling	раскатывание, скручивание	պատում, ոլորում
cutting	нарезание, резка	կտրատում
extrusion	прессование, экструзия	մամլում
crystallization	кристаллизация	բյուրեղացում
dissolution	растворение	լուծում
evaporation	Выпаривание	գոլորշիացում
frying	обжарка	բոլում, կարմրեցում
baking	запекание, выпекание	թխում
roasting	обжаривание	տապակում
thermal preservation	термическое консервирование	ջերմային պահածոյացում
non-thermal preservation	нетермическое консервирование	ոչ ջերմային պահածոյացում
cleaning	очистка	մաքում
disinfection	дезинфекция, обеззараживание	ախտահանում
sanitation	санитарная, очистка	սանիտարական մաքում
membrane processes	мембранный процесс	թաղանթային գործընթաց
packaging	упаковка	փաթեթավորում

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Վարդանյան Անահիտ Միհրանի
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TECHNOLOGY IN ENGLISH

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(տեխնոլոգիական ֆակուլտետի ուսանողների համար)

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Учебное пособие по английскому языку
(для студентов технологического факультета)

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