ПЕРМСКИЙ
ГОСУДАРСТВЕННЫЙ
НАЦИОНАЛЬНЫЙ
ИССЛЕДОВАТЕЛЬСКИЙ
УНИВЕРСИТЕТ

ИНОСТРАННЫЙ ЯЗЫК (АНГЛИЙСКИЙ)

MATERIALS FOR PSYCHOLOGY STUDENTS

STUDENT'S BOOK

ИЗДАТЕЛЬСКИЙ ЦЕНТР
"Perm University Press"

МИНИСТЕРСТВО НАУКИ И ВЫСШЕГО ОБРАЗОВАНИЯ
РОССИЙСКОЙ ФЕДЕРАЦИИ

Федеральное государственное автономное
образовательное учреждение высшего образования
«ПЕРМСКИЙ ГОСУДАРСТВЕННЫЙ
НАЦИОНАЛЬНЫЙ ИССЛЕДОВАТЕЛЬСКИЙ УНИВЕРСИТЕТ»

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MATERIALS FOR PSYCHOLOGY STUDENTS
STUDENT'S BOOK

*Допущено методическим советом
Пермского государственного национального
исследовательского университета в качестве
учебно-методического пособия для студентов,
обучающихся по направлению подготовки бакалавров
и магистров «Психология»*

Пермь 2022

УДК 811.11
ББК 81.2Англ
И683

Иностранный язык (английский). Materials for Psychology
И683 students. Student's Book [Электронный ресурс] : учебно-методическое пособие / составители: Е. А. Гриценко, Т. В. Пенькова, А. М. Гуреева, С. В. Полякова ; Пермский государственный национальный исследовательский университет. – Электронные данные. – Пермь, 2022. – 2,03 Мб ; 142 с. – Режим доступа: http://www.psu.ru/files/docs/science/books/uchebnie-posobiya/materials-for-psychology-students-student.pdf. – Заглавие с экрана.

ISBN 978-5-7944-3782-9

Целью пособия является совершенствование навыков речевой деятельности, работа над различными видами чтения, расширение словарного запаса, повышение лингвистической, коммуникативной, межкультурной и профессиональной компетенции студентов, обучающихся по направлению «Психология».

Пособие предназначено для аудиторной и самостоятельной работы студентов направлений бакалавриат и магистратура и может быть использовано как при очной, так и заочной форме обучения.

УДК 811.11
ББК 81.2Англ

Издается по решению ученого совета
факультета современных иностранных языков и литератур
Пермского государственного национального исследовательского университета

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ISBN 978-5-7944-3782-9

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Unit 1
THE SCIENCE OF PSYCHOLOGY

Chapter 1
THE FIELDS OF PSYCHOLOGY

WARM-UP
The terms we use
Discuss the following questions

- When you think about psychology, which words/ ideas come to your mind?
- What is psychology then?

LISTENING
Pre-listening

Psychologists work in a wide variety of areas. Below are some divisions of the field of psychology. Comment on the main focus of each and try to add more to the list:
Teaching psychology
Psychology and arts
School psychology
Developmental psychology…

The following phrases can help you
Deal with; investigate; conduct research; study; specialize in; be concerned with

VOCABULARY FOCUS

A. Word formation
Fill in the table using the appropriate words

Noun	*Verb*	*Adjective*
e.g. behaviour	behave	behavioral
		developmental
experiment		
science		
	retire	
		adjusted

Noun	*Verb*	*Adjective*
breadth		
	think	
identity		
		marital
	motivate	

B. Match the definitions with the words/phrases they describe

1. The time when you are an adult	a) puberty
2. Relating to unborn babies	b) parenting
3. A person of the same age, or who has the same type of job, social status, etc	c) hereditary
4. A baby or very young child	d) prenatal
5. The stage of physical development during which you change from a child to an adult and are able to have children	e) adulthood
6. Sudden big changes in someone's mood	f) research
7. The skill or activity of looking after your own children	g) mood swings
8. A quality or illness passed from a parent to a child before the child is born	h) group morale
9. Serious study of a subject in order to discover new facts or test new ideas	i) peer
10. The level of confidence and positive feelings that people have, especially people who work together	j) infant

While-listening

FIELDS OF PSYCHOLOGY

Task 1

Listening for the main idea

You will hear a fragment of a lecture on the fields of psychology. Match the headings of the fields of psychology with the respective descriptions. One heading is extra. The first one has been done for you.

Developmental psychology – 1
Social Psychology –
Personality Psychology -
Physiological Psychology -
Experimental Psychology -
Industrial and Organizational Psychology (I/O) -
Clinical and Counseling Psychology -

Task 2
Listening for details.

As you have matched the headings with the fields of psychology, listen once again to write down the key words and phrases in each segment. In other words you are going to take notes of the lecture.

Field of Psychology	Notes
1….	human mental and physical growth ….
Specialists working in the field:	adolescent psychologists,…
2….	the biological…
Specialists working in the field:	Neuropsychologists,…
3. In this field psychologists…	…, perception
4. A therapist … …	…
……..	deals with usual …
5. These psychologists ….	…. attitudes,…
6.…	such practical matters as …

USE OF ENGLISH

Read the passage below and fill in the gaps with a suitable word. There is an example at the beginning.

PSYCHOLOGISTS STUDY AND CONTRIBUTE TO THE WORK ENVIRONMENT

Anywhere people work, and anything they (0) do while at work, is of interest to psychologists. Psychologists study (1) _____ makes people effective, satisfied, and motivated in (2) _____ jobs; what distinguishes good workers (3) _____ poor ones; and what conditions of work promote high (4) ____ low productivity, morale, and safety.

Some psychologists design programs (5) _____ recruiting, selecting, placing, and training employees. They evaluate, monitor, (6) _____ improve performance. They help make changes in the way the organization (7) ____ set up.

Others help design the actual tasks, tools, and environments (8) _____ which people must deal when doing their jobs. These specialists can also help design the products (9) _____ organizations turn out and conduct research related to product design. For (10) _____, they play a big role in making computer hardware and software (11) _____ user-friendly, which in turn contributes both to operator performance in the workplace and product acceptability in the marketplace.

SPEAKING

- Which subdivision are you interested in and why? Share your ideas with the group.

- **Careers in Psychology**

Some people may be studying psychology out of general interest; others may be considering careers in psychology. What kinds of careers are open to psychology graduates in Russia?

READING

WHAT HOLDS PSYCHOLOGY TOGETHER?

Pre-reading

Given this wide range of interests, what holds psychology together? What do psychologists specializing in different fields have in common? What

distinguishes psychologists from other scientists who try to understand human beings?

While reading

A. You are going to read a text on a number of fundamental questions about behaviour that cut across the different areas of specialization in psychology. Choose the most suitable heading from the list A-F of the text. There is one extra heading which you do not need to use. There is an example at the beginning.

Mind-Body – A
Diversity – Uniformity B
Person-Situation – C
Stability-Change – D
Heredity-Environment - E
The young-The Elderly – F

0 ---C To what extent is behaviour caused by processes that occur inside the person (such as thoughts, emotions, motives, values, and genes)? In contrast, to what extent is behaviour controlled or caused by factors outside the person? These questions are important in our consideration of behaviour genetics, learning, emotion and motivation, personality, and social psychology.

1 ___ For decades, psychologists have been debating the degree of influence that heredity (genetics) and environment or experience have on behaviour. This is the famous "nature vs. nurture" debate. This issue appears in discussions of behaviour genetics, intelligence, development, personality, and abnormal psychology.

2_____ To what extent do people stay relatively unchanged throughout their lives? How much do we change? Can you "teach old dogs new tricks"? Is the child "father to the man"? Or is each day a new beginning with the possibility for significant change? Developmental psychologists are especially interested in these questions although their interest is shared by psychologists who specialize in personality, adjustment, abnormal psychology, and therapy as well as other areas.

3_____ To what extent is every person in certain respects (a) like all other people, (b) like some other people, (c) like no other person? Does our understanding apply

equally well to every human being? Do we perhaps need "different psychologies" to explain the wide diversity of human behaviours?

4____ Finally, many psychologists are fascinated by the relationship between what we experience (such as thoughts and feelings) and biological processes (such as activity in the nervous system).

So despite their apparent differences, psychologists are drawn together in part because of their common interest in enduring questions such as these.

B. How did you know?
Underline two phrases or sentences from each of the four paragraphs which helped you choose its heading.

C. In pairs, discuss your answers. Did you choose the same headings for the same reasons?

VOCABULARY FOCUS
Read these definitions and then use the words *in bold* to complete the sentences below.

diversity (n) – a range of different people or things; variety
significant (adj) **–** having an important effect or influence
apply (v) – to use something such as a method, idea, or law in a particular situation, activity, or process
occur (v) – *formal* 1. to happen 2. to happen or exist in a particular place or situation [+ in/among, etc]
experience (v) – 1. if you experience a problem or situation, it happens to you or affects you; 2. to feel a particular emotion or physical sensation
experience (n) – 1. knowledge/skill; 2. something that happens to you or something you do
extent (n) – the limit or degree of something's influence etc;
to a certain extent/to some extent – used to say that something is partly, but not completely true
throughout (adv.,prep) – 1. in every part of a particular area, place, etc.; 2. during all of a particular period, from the beginning to the end
share (v) – 1. use together; 2. to have the same opinion as someone else

behaviour (U,C n)–1. the manner of conducting oneself; 2. anything that an organism does involving action and response to stimulation; 3. the response of an individual, group, or species to its environment

1 She was involved in politics _____ her life.
2 Many accidents _____ in the home.
3 Modern psychology attempts to study the whole range of human and animal _____, using scientific methods.
4 Please inform us if there are any _____ changes in your plans.
5 None of us are close friends but we all ____ an interest in sport.
6 The cultural _____ of this country makes it so attractive and unique.
7 A new method is being successfully _____ to our research.
8 There is no point telling teenagers anything – you just have to let them learn from their _____.
9 To a certain _____ it was my fault that we lost the contract.
10 Children need to _____ things themselves in order to learn from them.

GRAMMAR FOCUS

Here are some questions for an interview with a psychologist to speak about his/her career. There is a mistake in each question. Correct the mistakes.

1. What field of psychology are you interesting in?
2. Who or what was the bigest influence on your entering the field?
3. What is your achievements?
4. What do you enjoying most/least about your job?
5. When did you knew this was 'the dream job' to which you aspired?
6. What did surprise you most when you began the job?
7. What does your average day like?
8. What's is the biggest sacrifice you've made for your career?
9. If you had to do all over again, what you would do differently?
10. What advices would you give someone wanting to enter this field?

Chapter 2
THE GROWTH OF PSYCHOLGY

WARM-UP

- How do you understand this statement: Psychology has a long past but a short history?
- What research methods/techniques are used in psychology?

READING

Task 1

You are going to read a text about one of the schools of psychology. Skim the text through and say which school is described.

Task 2

Read the text once again and for questions 1 -5, choose the answer (A, B or C) which you think is correct according to the text.

The formal psychological laboratory was founded in 1879 by Wilhelm Wundt, a psychologist and philosopher at the University of Leipzig in Germany. His goal was to develop techniques for uncovering the natural laws of the human mind. At the outset, Wundt did not attract much attention; only four students attended his first lecture. By the mid-1890s, however, his classes were filled to capacity.

Wundt's primary interest was perception. When we looked at a banana, for example, we immediately think, "here is a fruit, something to peel and eat". But these are associations based on past experience. All we really see is a long, yellow object. Wundt and his students set out to strip perception of all its associations to find the most fundamental elements, or "atoms", of thought. They trained themselves in the art of objective introspection, recording in minute detail their thoughts, feelings, their heartbeat, and respiration rates when listening to a metronome, for example. This may sound crude today, but Wundt's insistence on measurement and experimentation marked psychology as a science from the beginning.

Perhaps the most important of the Leipzig lab was its students, who carried the new science to universities around the world. Among them was Edward Bradford Titchener. British by birth, Titchener was appointed professor of psychology at Cornell University, a post that he held until his death in 1927.

Psychology, Titchener wrote, is the science of consciousness – "physics with the observer kept in". In physics, an hour or a mile is an exact measure. To the observer, however, an hour may seem to pass in seconds, whereas a mile may seem endless. Titchener broke consciousness down into three basic elements: physical sensations (what we see), feelings (such as liking or disliking bananas), and images (memories of other bananas). Even the most complex thoughts can be reduced to these simple elements. Titchener saw psychology's role as identifying these elements and showing how they can be combined and integrated. Because it stresses the basic units of experience and the combinations in which they occur, this school of psychology is called _____.

1. By the mid-1890s Wundt
   a) didn't have many students
   b) had a lot of students
   c) had a few students

2. To find the most fundamental elements of thought Wundt
   a) relied on associations
   b) tried to rid perception of associations
   c) based on past experience

3. *Objective introspection* is:
   a) self-examination
   b) studying other people's thoughts, feelings, etc.
   c) studying nature

4. Edward Titchener is known for that
   a) he was one of Wilhelm Wundt's brightest students
   b) he was professor of psychology at Cornell University for a long time
   c) he specified the basic elements of consciousness

5. Titchener defined psychology as
   a) physics
   b) an exact measure of reality
   c) the study of mental processes

USE OF ENGLISH

Read the text below and think of the word which best fits each space. Use only one word in each space. There is an example at the beginning (0)

Example: 0 – attacking/criticizing

GESTALT PSYCHOLOGY

A group of psychologists in Germany was (0) _____ structuralism. Max Wertheimer, Wolfgang Kohler, and Kurt Koffka were all interested (1) _____ perception, but particularly in certain tricks (2) _____ the mind plays on itself. Why, they asked, when we are shown a series of still pictures flashed (3) _____ a constant rate (e.g. movies or "moving neon signs"), (4) _____ the pictures seem to move? The eye sees only a series of still pictures. What makes us perceive motion? Phenomena (5) _____ these launched a new school of thought, Gestalt psychology. Translated from German, Gestalt (6) _____ "whole" or "form". When applied (7) _____ perception, it refers to our tendency to see patterns, to distinguish an object from (8)_____ background, to complete a picture from a few cues. Like William James, the Gestalt psychologist rejected the structuralists' attempt to break down perception and thought (9) _____ their elements. When we look at a tree, we see just that, a tree, (10) _____ a series of isolated leaves and branches. Gestalt psychology paved the way for the modern study of perception.

COMMUNICATION SKILLS

ACTIVE LISTENING

Many individuals mistakenly believe that listening is the easiest part of the communication exchange and that communicating your message is the most difficult. Nothing could be further from the truth. Listening is hard work when done effectively. It requires focusing unwaveringly on the individuals speaking, thoughtfully considering what they are saying and how they are saying it, listening to your own internal reactions to the message, managing those reactions and trying to connect the various lines of reasoning that may unfold during a group discussion.

Good listeners use a number of techniques to increase their ability to hear what others are saying:

- Restating in their own words what they believe has been communicated (*paraphrasing*)

- Reflecting back the message using the speaker's exact words. *(mirroring)*
- Making sure the message has been understood. "Let me make sure I understand what you've said. It sounds to me like. …" *(clarifying)*
- Using body language and verbal cues to encourage the speaker to continue or expand. "Tell me a bit more about what you are thinking." *(encouraging)*
- Using silence to allow time for messages to sink in, strong emotions to dissipate or a speaker to gather his or her thoughts. *(being intentionally silent)*

ROLE-PLAY

(Pair work) Your task is to define good and bad approaches to listening. For this you have to examine the roles that the listener and the speaker play in a communication exchange

Step 1

One member of the pair is the speaker. The speaker will talk for 3-4 minutes on one of the suggested topics:

- A person whom you admire. Explain when you met this person, how you got to know him/her, what the qualities are that make this person special to you.

- An important experience in your life taught you a valuable lesson – explain what the experience was, the lesson you learned, and why it is important to you.

- A time that you worked very hard and accomplished something very important – explain what it was, when and why you did it.

- A movie or book that you read, which you think has a very important message – explain the film, the message, and why you think it was important.

The other member of the pair is to ignore the speaker, pay very little attention, make the speaker uncomfortable, etc.

Step 2

Switch roles and repeat the task.

As a whole group consider these questions and share your impressions:

1. When you were the speaker, what was it like trying to talk about your topic?
2. Speakers, what did your listener do to try to avoid listening to you?
3. When you were the listener, what was this experience like for you?

4. What do you conclude about the roles and relationships between the listener and the speaker in a communication exchange?
5. So if these are poor listening habits, what would be the good listening behaviors?

Steps 3 and 4
Repeat the role play again, this time using good listening skills.
As a whole group consider these questions and share your impressions:

1. When you were the speaker, what was it like for you now, talking about your topic?
2. What good listening skills did your listener use?
3. When you were the listener, how did using the good listening behaviors help you?

To sum up the activity complete the table:

POOR LISTENING BEHAVIORS	***GOOD LISTENING STRATEGIES***
Looks repeatedly at watch or clock	Does not check the time often

SPEAKING AND DISCUSSION

- (Pairwork) Draw a Psychology timeline. You can visit this site to make an electronic timeline:

http://www.teach-nology.com/web_tools/materials/timeline/

Compare the results as a group.

GROUP PROJECTS

The American proverb goes: *There is strength in numbers.*
How does this proverb relate to being involved in groupwork? Can you think of a Russian equivalent?

You probably know that people are communicating all the time with their bodies as well as their words, whether intentionally or unintentionally. In fact, people who study communication say that people receive and understand your communication due to:

- 7% – verbal language (the words you use)
- 38% – paralanguage (what goes along with the words: pitch[1], vocal resonance, articulation, tempo[2], volume[3], rhythm, etc.
- 55% – non-verbal body language

In groups of three/four decide on a most remarkable event in the history of psychology and prepare a presentation on it. Think of a plan for organizing and working on the project. How will you share the responsibilities? Who will be a presenter? Who will take care of visual aids, etc? Think about the timing.

Your group mates and you yourself will assess the work with a rubric.

What is a rubric? It is a scoring scale that lists the criteria for a piece of work. So a rubric for a project will list the things the student must have included receiving a certain score or rating. Rubrics help the student understand how their project will be assessed.

Generally rubrics specify the level of performance expected for several levels of quality. These levels of quality may be written as different ratings (e.g., Excellent, Good, Needs Improvement) or as numerical scores (e.g., 4, 3, 2, 1) which are then added up to form a total score.

Rubrics can help students and teachers define «quality». Rubrics can also help students judge and revise their own work before handing in their assignments.

[1] how high or low your voice is
[2] the speed at which you speak
[3] the amount of loudness

- As a whole class work out a Presentation Rubric (the beginning has been done for you). Which other criteria of the task accomplishment should be included?

Presentation Rubric

	4	3	2	1
Content				
Structure				
….				

This site can help you create a rubric
http://pblchecklist.4teachers.org/

Suggested topics: Behaviorism; Functionalism; Humanistic Psychology; Cognitive psychology; Evolutionary Psychology; Multiple Perspective of Psychology Today; Women in Psychology; Ethics and Psychology, etc)

Site to explore:
http://psych.athabascau.ca/html/aupr/history.shtml

SCIENCE IN THE NEWS

Read the article and answer the questions below

1. What is the main idea of the text?
2. Does the article explain why work in pairs is not as effective?
3. What type of problems can be better solved in small groups?
4. What do you think of group work?
5. Can you say from personal experience when pair work is effective and efficient enough?

Одна голова – хорошо, а две – не лучше!

Патрик Логлин (Patrick Laughlin), руководитель исследования, объясняет полученные результаты весьма тривиально: «люди, работающие вместе, быстрее вырабатывают правильные решения, отсеивают ошибки, и эффективнее обрабатывают информацию».

Это, конечно, действительно так, но как быть с группами по два человека? Ведь согласно результатам того же исследования, эффективность работы групп по

два человека не отличалась от тех, кто работал самостоятельно! Любопытно также, что, среди высокоэффективных «троек», «четверок» и «пятерок» не наблюдалось никакой разницы в скорости решения задач. Иными словами, скорость решения задачи не зависела от того, три, четыре или пять человек входило в состав группы.

Таким образом, результаты исследования свидетельствуют, что группа из трех человек является «необходимым и достаточным условием высокоэффективного решения сложных задач». Авторы подчеркивают, что полученные данные отражают эффективность малых групп в решении логических, качественных и вербальных задач.

Нужны дополнительные исследования для оценки выполнения других типов задач малыми группами. Но уже сейчас результатами исследования заинтересовались бизнесмены, медики и научные работники.

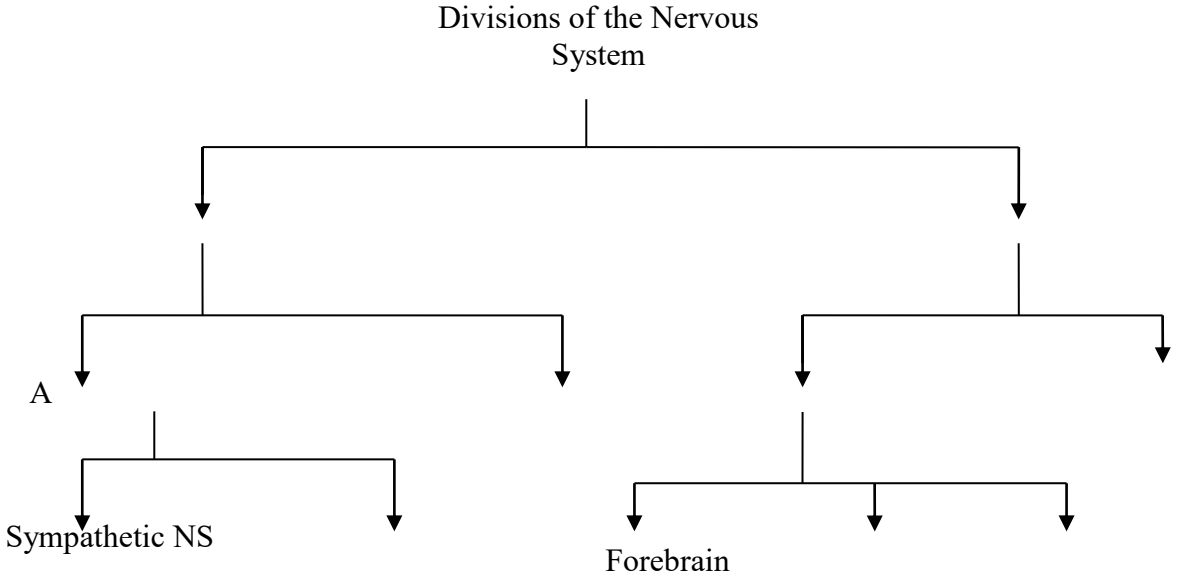
Unit 2
THE BIOLOGICAL BASIS OF BEHAVIOR

Chapter 1
THE NERVOUS SYSTEM

WARM-UP

In this chapter we will explore **the Nervous System**, one of the two major systems that integrate and coordinate our behavior, keeping it in constant contact with what is going on around. Look at the schematic diagram of the divisions of the nervous system below. Work in pairs to label its parts and subparts choosing the names from the box. Compare your results with the rest of the class. Practice the pronunciation of the words.

The Nervous System



Spinal cord Brain Peripheral Nervous System Central Nervous System Midbrain Hindbrain [haindbrein] Autonomic division Somatic division Sympathetic Parasympathetic Forebrain

THINK ABOUT IT!

1. Do drugs affect the behavior of neurons?
2. True or False: Injuries to certain parts of the brain can produce blindness, even if the eyes themselves are not damaged.
3. Can we control our own blood pressure and headaches?

DISCUSSION

A. Computer in Your Head?

The human brain has been compared to many different objects and devices – from a spider web to a telephone switchboard. Today, people like to compare it to a computer. Is our brain really like the metal box that stands on a desk? Let's look at the similarities and the differences between the two.

Work in pairs first then discuss your ideas as a whole group.

Similar	Different
Computers and brains both need energy	A computer needs electricity; it can be switched off and on. Unlike a computer, the human brain has no off switch. Even when we are asleep, our brain is active. The brain gets its energy from the food we eat.

LISTENING

You will hear a talk about the Edwin Smith Surgical Papyrus twice. As you listen to the recording, answer the following questions by circling T for 'True' and F for 'False'.

Listening strategies and tips

- Do not worry about words that you do not know. Many people believe that listening effectively means understanding all the words they hear. They are therefore convinced that if they do not understand every word, they will not be able to answer the questions. This is not correct.

- If you are not sure, guess. Even when listening to our native language, we do not always understand every word, for example in a noisy room or on a bad telephone connection. In these situations we instinctively use anticipating[4] and guessing strategies to understand the message.
- In answering true/false questions you should focus on the **accuracy of facts**. Before you hear the passage, try to identify and underline the parts of the statements which you need to listen for.
- Use the second listening to check that you are correct.

1. In the ancient times people believed the heart was the center of intelligence and thought.	T	F
2. The brain was kept in the mummies as one of the most important organs.	T	F
3. The term 'brain' was first mentioned in written form by the ancient Egyptians 3000 BC.	T	F
4. It is likely that the document was written by a famous Egyptian doctor.	T	F
5. The papyrus mentions not only the brain but the nerve as well.	T	F
6. Experts in medical history say that the 48 cases are dealt with in a reasoned manner.	T	F
7. Edwin Smith was an American Egyptologist who found the document by chance.	T	F
8. Today the document belongs at the New York Historical Society.	T	F

READING

NEURONS: THE MESSENGERS

Pre-reading

A. Imagine that we put under a microscope the nervous system's smallest unit: the nerve cell, or neuron. What does it look like? Which parts does it contain?

B. Match the words from the left column with their definitions from the right column.

[4] expecting something to happen and be ready for it

Example: a – 8

a. evidence (n)	1. making it possible for something to do something or happen
b. interfere with smth/smb (v)	2. to grow
c. branch out(v)	3. to prevent smth/smb from succeeding or from happening in the way that was planned
d. vast (adj.)	4. things put together so that they are dealt with at the same time
e. enabling	5. one of the pieces of flesh (плоть) inside your body that you use in order to move, and that connects your bones together
f. wire (n)	6. the smallest part of a living thing that can exist independently
g. split into (v)	7. extremely large
h. bundled together	8. facts or signs that show clearly that something exists or is true
i. muscle (n)	9. the thin pieces of flesh that form the nerves or muscles in your body
j. cell (n)	10. a protective covering that fits closely around something
k. (nerve/muscle) fibers	11. break into
l. sheath (n)	12. the material forming animal or plant cells
m. tissue (n)	13. a piece of metal used for carrying electrical currents or signals

While-reading

Read the text below and label the parts of the neuron in the figure. Check your results with your partner.

(РИСУНОК: НЕЙРОН БЕЗ НАЗВАНИЙ ЕГО ЧАСТЕЙ)

As many as 100 billion nerve cells or neurons can be found in the brain of an average human being. In addition, billions more neurons are in other parts of the nervous system. Like most other cells, each neuron has a cell body. Unlike other cells, however, neurons have tiny fibers enabling the neuron to receive messages from surrounding cells and pass them on to other cells.

Many small fibers called **dendrites** branch out from the cell body. The dendrites pick up messages coming in from other neurons and transmit them to the cell body. Also extending from the cell body of the neuron is a single long fiber called an **axon**. The axon is very thin and is usually much longer than the dendrites. For example, in adults, the axons that run from the brain to the base of the spinal cord may be as long as 3 feet[5]. Most axons, however, are only 1 or 2 mm long. A group of axons bundled together like parallel wires in an electrical cable is called a nerve. The axon carries outgoing messages from the cell and either passes them on to neighboring neurons or directs a muscle or gland to take action. Although there is just one axon per neuron, near its end the axon splits into many terminal branches. Because a single neuron may have hundreds or thousands of dendrites, and because the axon itself can branch out in numerous directions, one neuron can be in touch with hundreds or thousands of others at both its input end (dendrites) and its output end (axon).

The axon is surrounded by a white fatty covering called a **myelin sheath**. Not all axons are covered by myelin sheaths, but myelinated axons are found throughout the body. The myelin sheath appears pinched at intervals, which makes the axon resemble a string of microscopic sausages. Because of this white covering, tissues made up of lots of myelinated axons are known as 'white matter', whereas tissues comprising mostly unmyelinated axons and cell bodies look grey and thus are called 'grey matter'.

The kind of information neurons collect and the places to which they carry it help us distinguish among different types of neurons. Neurons that collect messages from sense organs and carry those messages and carry those messages to the spinal cord or the brain are called **sensory** neurons. Neurons that carry messages from the spinal cord or the brain to the muscles and glands are called **motor** neurons. And neurons that carry messages from one neuron to another are called **interneurons.**

The nervous system also contains a vast number of **glial cells**, or **glia.** Glial cells support neurons in a number of ways. They hold the neurons in the nervous system together; they remove waste products that could interfere with neural functions; and they prevent harmful substances from passing from the bloodstream into the brain. In addition, they form the myelin sheath that insulates and protects neurons. Recent evidence also suggests that glial cells may influence learning and memory.

[5] **Ft** a unit for measuring length, equal to 12 inches or about 30 centimeters

USE OF ENGLISH

Read the passage below and think of the word which best fits each space. Use only one word in each space. There is an example at the beginning (0)

Example: 0 – way

EXPERIENCE AND NEURONS

That drugs can change the (0)____ neurons synapses behave is probably something you would expect. But researchers studying the physiology (1)____ neurons have, over the past few decades, made some discoveries (2) _____ are quite surprising. Neuroscientists (3)_____ a laboratory experiment observed that changing a rat's surroundings also caused changes(4) ____ the animal's brain. It was found that rats that had (5)_____ raised in a stimulating environment had more synaptic connections (6)_____ rats that had been raised in cages that offered them no opportunities to explore or manipulate objects. The brain's ability to be physically and chemically altered (7)____ experience is called plasticity. The brain's plasticity (8)_____ many important implications.

ACADEMIC STYLE

Written English, like spoken English, may be formal or informal. The main features of academic writing are as follows:

- it is formal in an impersonal or objective style;
- cautious[6] language is often used in reporting research and making claims[7];
- vocabulary appropriate for particular academic contexts is used involving technical words;
- the structure of the writing will vary according to the particular genre, for example, essay, report, abstract, etc.;
- it often contains references to other writer's publications.

It is important to remember that writing styles (formal and informal) should not be mixed.

[6] careful
[7] a statement that something is true

Written academic English will not normally contain the following:

- contractions (e.g. I'm, it's, so on)
- fillers (e.g. well, you know, sort of …)
- conversational expressions (e.g. get – understand; constitute – make up)
- personal pronouns I, you, we. Instead the style may be more impersonal.

Academic English frequently uses language that is cautious or tentative[8]. The main language forms commonly used are:

- modal verbs (e.g. may, might, will, would, can, could)
- lexical verbs (e.g. seem, appear, suggest, indicate, assume, believe)
- modal adverbs (e.g. perhaps, probably, possibly, apparently)
- modal adjectives (e.g. probable, possible, (un)certain)
- modal nouns (e.g. assumption, claim, evidence, estimate, possibility)

I. Compare these two explanations or definitions of neuron. What are the main differences?

Informal/Spoken. Nuerons? Well, … they are sort of messengers…let me see… yes, they make up the nervous system and they send information throughout your nervous system and er…er… this way you feel pain, heat, things like that, and you can control your movements, I suppose.

Formal/Written. Neuron is a type of cell that constitutes the nervous system and sends messages to other parts of the body or the brain.

II. The following sentences are mixed formal and informal. Write F (formal) or I (informal) in the brackets after each sentence.

a. The work will be completed next month. ____
b. It is necessary to provide a convincing argument as to why the system should be changed. ____
c. All theories should be built on a foundation of factual knowledge. ____
d. It may seem logical, but this argument doesn't hold water. ____
e. It is possible to consider the results from a different perspective. ____
f. Let's look at the problem from a different perspective. ____
g. We'll finish the job next month. ____
h. How the drug works is not fully understood. ____
i. I just couldn't get what he meant. ____
j. We were wondering if you'd like to come with us. ____

[8] not definite or certain, and may be changed later

III. The following sentences are all informal. Rewrite them in a formal style.

a. He said it wasn't good enough. (It was said that ….)
b. The results were a lot better than I expected. (The results appeared …)
c. We've got to find out how to carry out the research. (We need to …)
d. I thought the lecture was terribly difficult to follow. (It seemed …)
e. As far as I know he is still there. (It was reported…)

IV. Cautious language is important in academic writing. In the passage below underline the vocabulary (e.g. impersonal verb phrases, etc) that makes the language careful and tentative. The beginning has been done for you.

The two major language areas in the brain are called Broca's area and Wernicke's area. Wernicke's area lies toward the back of the temporal lobe. This area is crucial in understanding what others are saying. By contrast, Broca's area, found in the frontal lobe, is considered to be essential to our ability to talk. To oversimplify a bit, Wernicke's area seems to be important for listening, and Broca's area seems to be important for talking.

If the brain damage primarily affects Broca's area, the aphasia (language problems) tends to be "expressive". That is, the patients' language difficulties lie predominantly in producing language (talking). If the damage primarily affects Wernicke's area, the aphasia tends to be "receptive", and patients generally have serious difficulties understanding language (listening).

Recent research shows, however, that this model of the brain may apply only to males.

DIFFERENT STYLES

I. Look at these explanations of 'the spinal cord', written in different styles. Decide if the explanations are spoken or written. Match each one with the source from which you think it is taken.

The Spinal Cord

a. [countable] the thick string of nerves enclosed in your spine, by which messages are sent to and from your brain

b. The complex cable of axons that connects the brain to most of the rest of the body is known as the spinal cord. We talk of the brain and the spinal cord as two distinct structures, but there is no clear boundary between them because, at its upper end, the spinal cord enlarges and merges into the hindbrain and midbrain. The spinal cord is made up of bundles of long nerve fibers and has two basic functions: to permit some reflex movements and to carry messages to and from the brain.
c. Now, let's look at the spinal cord. Although it tends to receive less attention than the brain, without it we would be severely limited. To put it another way, the spinal cord is pivotal to normal functioning of the body.
d. Well, the spinal cord is inside your backbone, and, you know, together with the brain they form the nervous system. If a person gets injured, say, in an accident, and the spinal cord gets damaged, then those people can't feel those parts of the body that are disconnected from the brain. Oh, that's terrible!
e. Ha, d'you know that your spinal cord is 43 cm long, and weighs some 35grams?! I now know what it's responsible for. I can tell yah if you want to listen to me.

Sources:

1. Spoken – a simple explanation by an adult.
2. Longman Dictionary of Contemporary English, 2005
3. Spoken – a child trying to share the new information with his/her mother.
4. Psychology. An introduction, C.G. Morris & A.A. Maisto, Prentice Hall, Upper Saddle River, New Jersey, 1999
5. Spoken – an introduction to a lecture on spinal cord.

II. Now write your own explanation of the 'spinal cord' in an academic style.

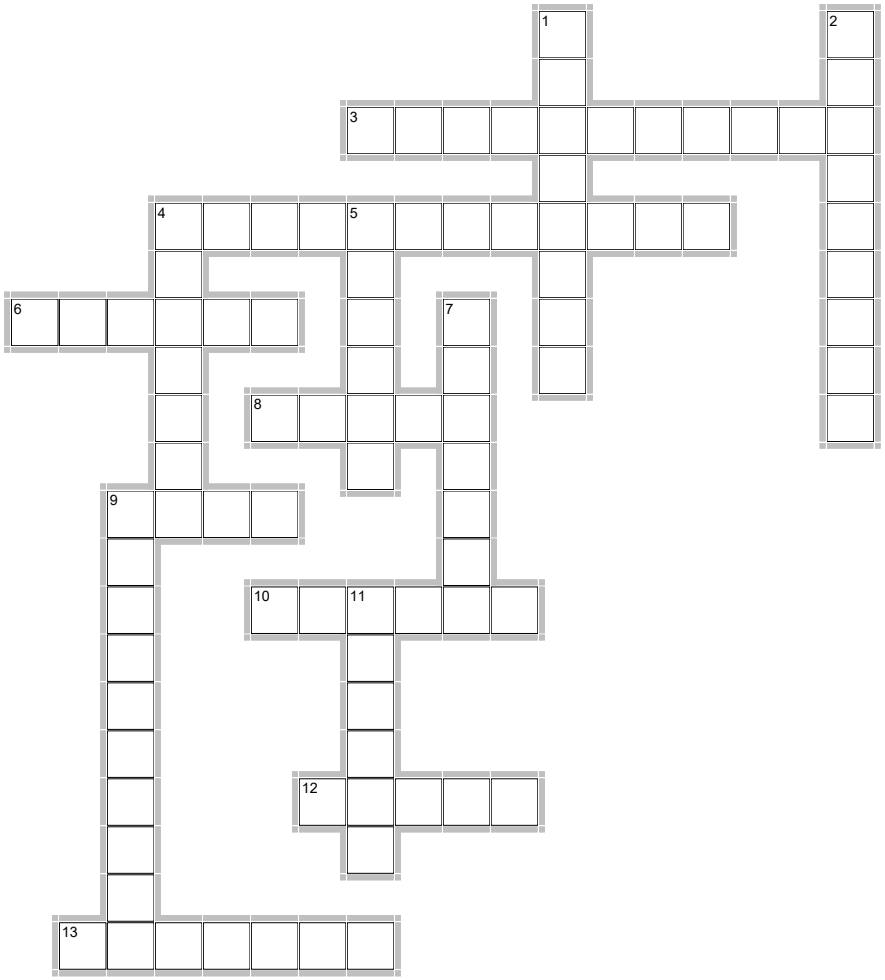
III. In an academic style write an explanation or definition of one of these:

The Brain	The Synapse
The Peripheral Nervous System	The Somatic Nervous System
The Autonomic Nervous System	The Neural Impulse

This site can help you: http://www.innerbody.com

Do this crossword
(When there are two words in an answer there is an empty square between them)

Nervous System



Across

3. the thick string of nerves enclosed in your spine
4. forebrain region that governs motivation and emotional responses
6. a type of cell that makes up the nervous system
8. the organ inside your head that controls how you think, feel, and move
9. the smallest part of a living thing that can exist independently
10. the outer layer of your brain
12. part inside your body which look like threads and carry messages between the brain and other parts of the body
13. a short electrical signal that travels in one direction along a nerve

Down

1. forebrain region that relays and translates incoming messages from the sense receptors, except those for smell
2. relating to the system in your body that produces hormones
4. a chemical substance produced by your body that influences its growth, development, and condition
5. the part of your body between your neck and diaphragm
7. the place where nerve cells meet, especially in the brain
9. the bottom part of your brain that controls your muscles
11. a sudden uncontrolled movement that your muscles make as a natural reaction to a physical effect

SELF-STUDY

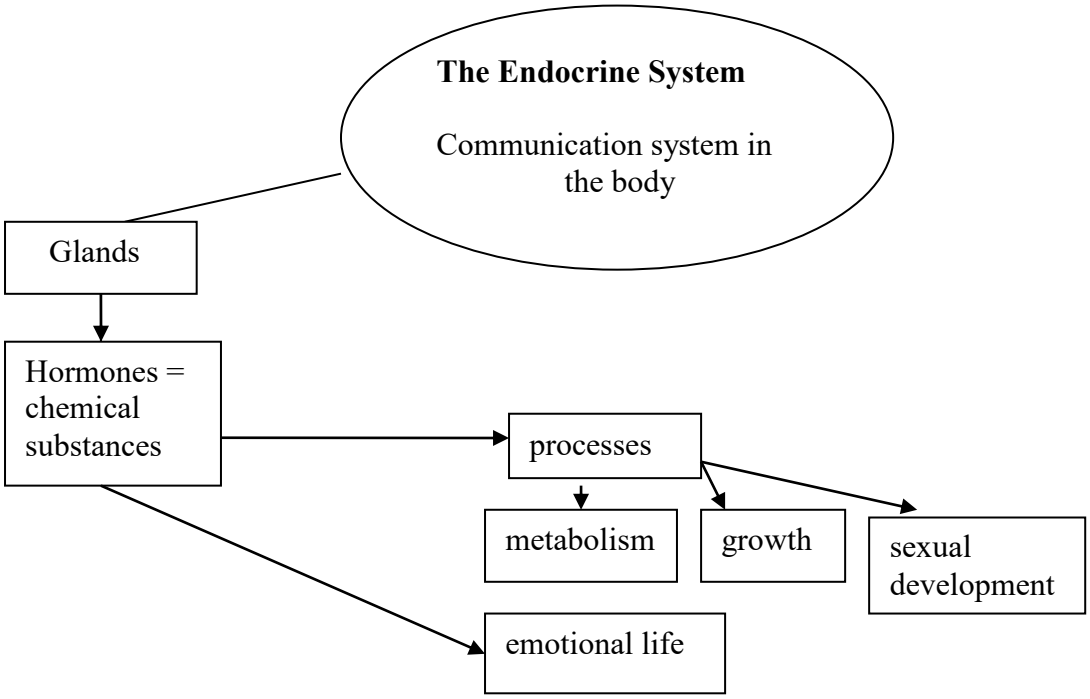
Watch the film *Mirror Neurons* at http://www.pbs.org (Secretes of the Mind) and answer the questions below:

1. Why are they called 'mirror' neurons?
2. What is empathy? How does science explain people's ability to be empathetic?
3. Which new words or expressions from the film would you like to remember? (Name five-seven of them)
4. Who are the authors of the film? Who presents the film?
5. Do you like the film? Why? Why not?

Chapter 2
THE ENDOCRINE SYSTEM

WARM-UP

In groups of three or four develop a definition of the endocrine system using this mind-map. Which verbs do you think you will need? Which linking words[9]? Then compare your results as a whole group.



VOCABULARY FOCUS

A. Match the Russian technical words with their English equivalents.

1. гипофиз	a. adrenal
2. шишковидная	b. gland
3. щитовидная	c. pancreas
4. паращитовидная	d. testes (in males)
5. надпочечная	e. pituitary
6. поджелудочная	f. pineal
7. яичники	g. ovaries (in females)
8. железа	h. parathyroid
9. предстата	i. thyroid

[9] **Linking words** or d**iscourse markers** indicate how one piece of text is connected to another piece of text. They show the connection between what has already been written or said and what is going to be written or said (e.g. and, also, such as, etc).

B. Below are some verbs that you can use to describe functions of endocrine glands and hormones. Make sure you know what they mean.

reduce; cause; secrete; lead to; control; affect/influence; balance; produce; respond to;

Complete the sentences using the suitable verbs in the correct form.

The **thyroid gland** _____ (1) thyroxin, a hormone that can _____ (2) concentration and _____ (3) irritability when the thyroid is active, and _____ (4) drowsiness and a sluggish metabolism when the thyroid is underactive.

Parathormone_____ (5) by the **parathyroids** _____ (6) and _____ (7) the levels of calcium and phosphate in the blood and tissue fluids. This, in turn, _____ (8) the excitability of the nervous system.

The **pineal gland** _____ ___ (9) exposure to light and regulates activity levels over the course of the day.

DISCUSSION

Do you agree or disagree with the following statements about the use of dictionaries?

1. At Intermediate level it is better to use a monolingual dictionary than a bilingual one.
2. The bilingual dictionary is most useful when you are reading something and don't know a word.
3. You can guess the meaning of about 70% of words from their contexts.
4. You must write down and try to remember all new vocabulary.
5. You remember new words better if you understand their meaning from the context and avoid using a dictionary.
6. It's necessary to look up words you find difficult immediately when reading a text.
7. You don't always remember words which you have had to look up in the dictionary.
8. You should buy the biggest dictionary that you can afford.
9. Electronic dictionaries will eventually take the place of regular ones.

Discuss your answers with other students. Decide on a list of statements that you all agree and think you can put into practice.

SELF-STUDY

In order to answer the questions below you will have to visit these two sites:
http://www.kidshealth.org
http://www.innerbody.com/image/endoov.html

1. Which site offers the pronunciations of the technical words? \ Practice them (Kidshealth)
2. What is the origin of the word 'pancreas'? (Innerbody)
3. What hormones does this gland produce?
4. What is the cause of diabetes?
5. What gland is located in the lower central part of the brain? (pituitary)
6. Choose one gland to speak about. The table below can help you sort the information out.

gland	location	function	malfunction

7. Say if you used a dictionary when working in the Net. If yes, electronic or paperback? Monolingual or bilingual? Did you find your dictionary helpful?
8. Did your knowledge of the subject help you? How much did you 'guess' from the context?

VOCABULARY FOCUS

Read these definitions and then use the words in bold to complete the sentences below.
gene (n) **–** a part of a cell in a living thing that controls what it looks like, how it grows, and how it develops.
heredity (n) – [U] the process by which mental and physical qualities are passed from a parent to a child before the child is born
evidence (n) **–** [U] facts that show clearly that something exists or is true
affect (v) – to do something that produces an effect or change in something
determine (v) – to find out the facts about something (=establish)
trait (n) – *formal* a particular quality in someone's character
likely (adj.) – something that is likely will probably happen or is probably true (*opp.* unlikely)
circumstance (n) – [C, usually plural] the conditions that affect a situation, action, event etc

1. Medical evidence shows that men are more _____ to have heart attacks than women.
2. People get their _____from their parents**.**
3. It's the best result that could be expected under the _____.
4. The study produced one interesting piece of _____.
5. It is a human _____ to joke about things that make us uncomfortable.
6. The doctor said that three factors had caused my arteries to be blocked: _____ , poor diet, and lack of exercise.
7. The police are trying to _____ what caused the fire.
8. The disease _____ the central nervous system.

READING

A. Quickly read the text below to get a general idea as to what it is about. Ignore any unknown words at this stage.

B. Read the text again and choose from the sentences A-H the one that fits each gap (1-6). There is one extra sentence which you do not need to use. There is an example at the beginning (0).

- Make sure the sentence you think is the answer fits logically and grammatically in terms of what comes before and what comes after.
- Look for any linking words/expressions that might help you.

A. However, scientists have developed a number of new molecular genetics techniques that are making it possible to study, and even change the human genetic code directly.
B. Strain studies, for example, are often used with animals to determine the heritability of traits.
C. Findings such as these may lead to greater understanding of some types of behavior.
D. The differences between them thus stem from both heredity and environment.
E. Any differences between them should be due to environmental differences.
F. Mice are often used because they breed quickly and yet have relatively complex behavior patterns.
G. So far, strong evidence has been uncovered that heredity plays a role in some forms of mental illness.
H. Of course, genes do not directly cause behavior.

GENETICS AND BEHAVIOR

The role of genetics in determining differences among people in various physical characteristics, such as eye color, height, and weight, is obvious. But there is increasing evidence that heredity also has a significant impact on behavior and conditions, including hyperactivity, epilepsy, some forms of mental illness, emotionality and responsiveness to stress, nervousness, shyness, alcohol dependence, etc. _**0**_/_**H**_ Rather, they affect both the development and operation of the nervous system and the endocrine system, which, in turn, influence the likelihood that a certain behavior will occur under the proper circumstances.

Researchers study behavior genetics both in animals and humans, but methods they use are different. Psychologists have invented several ways to determine the extent to which particular behavioral traits are passed on from one generation to the next. **1**/__ (B) Close relatives, such as siblings, are intensely inbred over many generations to create strains of animals that are genetically similar to one another and different from other strains.

_**2**_/__ (F) When animals from different strains are raised in the same environment, differences between them largely reflect genetic differences in the strains. Using this method, it has been shown that differences between mice with respect to such traits as sense of smell, susceptibility to seizures, and performance on a number of learning tasks are all affected by heredity.

Methods used with animals are out of question for studying the genetic basis of human behavior. _**3**_/__(A) The so-called Human Genome Project has begun to map all 23 pairs of human chromosomes (the entire human genome) and to determine which genes influence which characteristics. For example, researchers have already identified an individual gene on chromosome 19 that is associated with some form of Alzheimer's disease, and other specific chromosome sites have been shown to be a cause of alcoholism and intelligence. By using these genetic markers, researchers expect that we will be able to understand the role of heredity in even the most complex behaviors.

Through family studies, scientists examine genetic influences on human behavior. _**4**_/__(G) Children of schizophrenic parents are, for example, about ten times more likely to develop schizophrenia than are other children. But at the same time the influence of environment cannot completely be ruled out. Growing up in a household in which both parents have schizophrenia might cause a child to develop the disorder even if that child does not have a genetic predisposition for the illness.

In an effort to separate more clearly the influences of environment from that of heredity, psychologists often use twin studies. Twins can be either identical or fraternal. Identical twins develop from a single fertilized ovum, and they are therefore identical in genetic makeup. _**5**_/__ (E)

Fraternal twins, however, develop from two separate fertilized egg cells and are no more similar genetically than are other brothers and sisters. _**6**_/__(D) Assuming that the various pairs of twins studied grow up in similar environments, if identical twins share no more similarities on particular characteristics than fraternal twins do, then heredity cannot be important for that trait.

C. In pairs, discuss your answers. Which words or phrases in the text and in the list of sentences helped you to get the answers right?

GRAMMAR FOCUS
Prepositions
Use the prepositions from the box below to fill in the gaps.

by; on; in; to (2); of;

The nature versus nurture question refers ___ (1) the interactive role heredity (nature) and environment (nurture) play ___ (2) human behavior. Although no contemporary psychologist would take either a pure nature or a pure nurture view ___ (3) human behavior, the extent ___ (4) which many traits are influenced ___ (5) genetics and environment is still debated. The related fields of behavior genetics and evolutionary psychology help psychologists explore the influence of heredity ___ (6) human behavior.

Note: People normally store in memory not individual words, but word combinations (chunks). So it is a good idea to memorize verbs + prepositions

SCIENCE IN THE NEWS

Choose a passage to translate into English. Check your results with someone who did the same passage. Discuss your alternatives with a partner and help each other correct mistakes, if any. Ask your teacher for advice.

I. Немецкие ученые открыли ген, который отвечает за пристрастие человека к капусте, сообщает Ananova.

Это открытие сделали ученые из Германского института исследования пищевых продуктов, который расположен в пригороде Берлина Потсдам.
Они установили, что наличие в организме одной из разновидностей гена hTAS2R38 делает людей чувствительными к недостатку в организме пропилтиоурацила и фенилтиокарбамида. Эти вещества содержатся в капусте.
«Разновидности одного-единственного гена определяют пристрастия в еде», – заявил руководитель исследовательской группы Вольфганг Мейерхоф. Капуста является одним из самых популярных блюд в Германии. В британском сленге немецкое слово Sauerkraut (кислая капуста) даже стало нарицательным – так называют всех жителей Германии.
According to Anova, German scientists found a gene responsible for a human passion for cabbage. This discovery was made by scientists of the Research Institute for foodstuffs studies, which is situated in Potsdam, the suburb of Berlin. They established that

II. США: у лжецов мозги светлее

Исследование, проведенное в Калифорнийском университете в Лос-Анжелесе докторами Адрианом Рэйном и Ялингом Янгом и их коллегами показало, что в мозгу у постоянно врущих и обманывающих патологических лжецов имеются определенные структурные отклонения.

У этих людей, как показывает просвечивание методом магнитного резонанса, в префронтальной области мозга содержится меньше серого и больше белого вещества, чем у обычных индивидов.

Из прошлых исследований известно, что префронтальная область мозга заметно активизируется, когда нормальные люди начинают лгать. Видимо, эта часть мозга связана и с обучением моральному поведению.

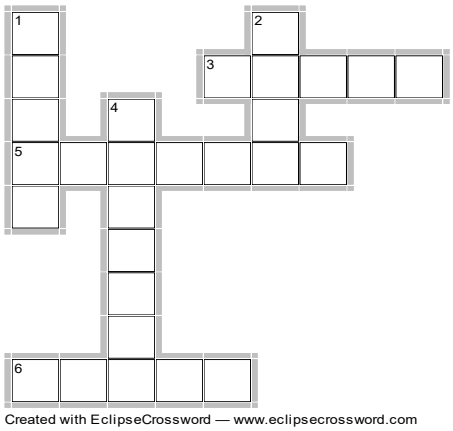
Избыток белого вещества в мозгу, как считают исследователи, повышает способность патологических лжецов к вранью и ослабляет их моральное сдерживание.

Unit 3
SENSATION AND PERCEPTION

Chapter 1
SENSATION

WARM-UP
Do the crossword below to complete the introductory statement to the chapter:

This chapter examines sensation, the process that enables us to gather information from numerous sources. Sensation refers to the raw sensory data from the senses of



Across

3. the feeling that is produced by a particular food or drink when you put it in your mouth
5. the sense which you use to hear sounds
6. the quality that people and animals recognize by using their nose

Down

1. ability to see
2. the feeling you have when part of your body hurts
4. a state in which all your weight is evenly spread so that you do not fall

THINK ABOUT IT!

1. How many colors can we distinguish?
2. Which sense is more sensitive – taste or smell?
3. Does listening to loud music really damage the ears?

READING 1
Pre-reading

VISION

Different animal species depend more on some senses than on others. Dogs rely heavily on the sense of smell, bats on hearing, and some fish on taste. But for humans, vision ranks as the most important sense. As a result, it has received the most attention from psychologists. To understand vision, we need to look first at the parts of the visual system, beginning with the structure of the eye.

VOCABULARY FOCUS

Match the Russian terms with their English equivalents

1. Сетчатка	a) Blind spot
2. Зрачок	b) Cornea
3. Радужная оболочка	c) Lens
4. Роговица	d) Optic nerve
5. Хрусталик глаза	e) Fovea
6. Тёмное пятно	f) Retina
7. Ямка	g) Iris
8. Зрительный нерв	h) Pupil

Check your results with a partner.

While-reading
Now study Fig. (строение человеческого глаза), read the text below, and fill in the gaps with the appropriate word.

The structure of the human eye, including the cellular path to the brain, is shown in **Fig.**

Light enters the eye through the (1)_____ (cornea), the transparent protective coating over the front part of the eye. It then passes through the (2)_____, the opening through the center of the (3) _____, the colored part of the eye. In very bright light, the muscles in the (4)_____ contract to make the pupil smaller and thus protect the eye from damage. This contraction also helps us see better in bright light. In dim light, the muscles relax to open the pupil wider and let in as much light as possible.

Inside the pupil light moves through the (5)_____, which focuses it onto the (6)_____, the light-sensitive inner lining of the back of the eyeball. The lens changes shape to focus on objects that are closer or farther away. Normally the lens is focused on a middle distance, at a point neither very near nor very far away. To focus on an object that is very close to the eyes, tiny muscles around the lens contract and make the lens rounder. To focus on something far away, the muscles work to flatten the lens.
On the retina and directly behind the lens lies a depressed spot called the (7)_____. The (8)_____ _____ carries messages from each eye to the brain. The place on the retina where the axons of all the ganglion cells join to leave the eye is called the (9) _____.

GRAMMAR FOCUS

Adverb or adjective?

Normally adverbs are used with verbs.

e.g. People can *accurately* identify a taste within one-tenth of a second after something salty or sweet has touched the tongue.

This tells you how people can identify the smell.
However, with certain verbs it is sometimes necessary to use adjectives. These verbs are usually connected with our senses – *look*[10]*, sound, taste, feel*[11]*, and smell.* Other verbs include *be, seem*[12]*, and appear*[13].
e.g. The picture looks *beautiful.*

- **With a partner discuss what you would say in the following situations.**

e.g. You're eating an apple. The apple tastes *sweet.*
a) You're listening to music. It sounds ….
b) You're looking at a cell under the microscope. It seems…
c) You're looking at Pete. He looks …
d) You're wearing clean clothes again. It feels…
e) You're eating a Japanese dish. It tastes…
f) You're walking by the sea. It smells…

- **Check your dictionary for other usages of the verbs above.**

[10] You use ***look*** to say how someone or something seems to you when you look at them
[11] if a situation, event etc feels good, strange etc, that is the emotion or feeling that it gives you
[12] to appear to exist or be true, or to have a particular quality
[13] Seem and appear have the same meaning but appear is more formal

READING 2

A. You are going to read a text about a placebo. What is placebo? What do you think the text might be about?

B. Now read the text. Were your predictions correct?

EXPLAINING THE PLACEBO EFFECT

Presented by the VOA Special English Health Report, *2006*

Studies of new drugs traditionally involve at least two groups of people. The people in one of those groups are given only what they think is the drug. Really they get a placebo – an inactive substance. The drug is proven effective if it performs better than the placebo.

Some researchers do not think drug studies should use placebos. They say it makes more sense to compare new medicines to drugs already on the market. Then people would know if a new drug is any better.

«Placebo» is Latin for «I shall please» It may contain nothing more than sugar.

Yet some people who are given a placebo ***feel*** improvements in their health. This is called the placebo effect.

Some doctors use the placebo effect in their treatments. An ***important*** study published in nineteen fifty-five said placebo treatments made patients feel better thirty-five percent of the time.

But in two thousand one, Danish researchers reported that they had ***analyzed*** more than one hundred studies. They found little evidence of healing as a result of placebos.

Still, there is continued belief in the placebo effect.

A Swedish study published last year suggested that a placebo can reduce the emotional effects of unpleasant experiences. The study involved people who looked at images of dead bodies and other unpleasant pictures. The findings appeared in the journal Neuron.

The researchers said the effects in the brain were similar to those seen when placebos have been used as a pain treatment. In both cases, they said, expectations of improvement are a major influence.

But more than expectations might explain why placebos ***seem*** effective sometimes.

Researchers led by Scot Simpson at the University of Alberta, in Canada, just had a report published in the British Medical Journal. They examined twenty-one studies. These compared death rates between patients who always took their medicine and those who did not.

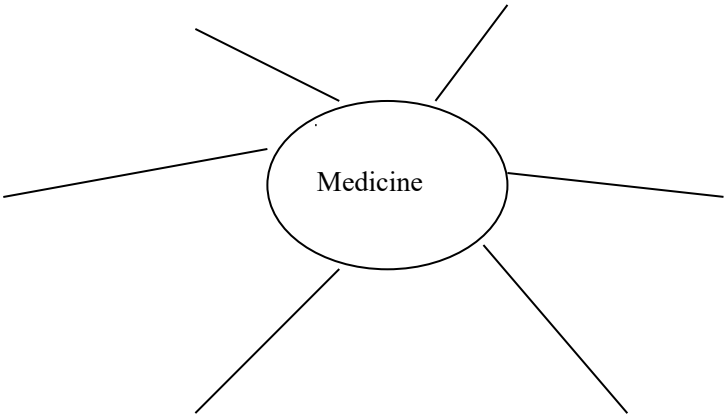
Even patients who took placebos had better results than those who did not follow doctor's orders. The researchers see this finding as ***evidence*** of a so-called healthy

adherer effect. That is, a person who takes a drug treatment as directed may also do other things to live a healthy life.

C. Read the text again and answer the following questions:

- Which countries are there references to? In what contexts?
- 'Experiences' is a countable noun in par. 8. What would its meaning be if it were uncountable?
- What is the origin of the word 'placebo'? Use your dictionary to find out how it is related to the verb 'please'. What is the meaning of the verb in that case?
- What do these numbers refer to: 2006 ,21 ,100, 2, 2001, 35, 1955, 1, 2005?
- What can be said about a placebo effect?

D. Use the words from the text associated with medicine to complete the mind-map below.



LISTENING

- You are going to listen to the text and replace the words in italics with the words you hear.
- Obviously those will be synonyms. Can you predict which words you might hear?
- Check your answers with a partner.

Post-listening

A. Match the words on the right with their opposites.

1. evidence(n)	a) neglect (v)
2. reduce(v)	b) hold info/facts back (v)
3. improvement(n)	c) skepticism (n)
4. inactive(adj.)	d) deterioration (n)
5. belief (n)	e) speculation (n)
6. examine(v)	f) active (adj.)
7. report(v)	g) increase (v)

B. Complete the sentences below with a suitable word from the columns above.

1. We aim to _____the news as fairly as possible.
2. Your English is much better, but there's still room for _____.
3. The population ____ dramatically in the first half of the century.
4. Small businesses will need to _____ costs in order to survive.
5. She's over 80, but is still very_____.

VOCABULARY FOCUS

A. The Russian word *чувство* may be translated into English as *feeling, emotion,* or *sense.* Which English word you should use depends on what you mean. Study the explanations below.

Sense 1. (C)a feeling about something;
2. (sing.) the ability to understand or judge something (e.g. a sense of humour);
3. (C)one of the natural powers of sight, hearing, feeling, taste, and smell, that give us information about the things around us;

Feeling 1. (C) an emotion that you feel, such as anger, sadness, or happiness;
2. (pl.) someone's feelings are their thoughts, emotions, and attitudes;
3. (C) a belief or opinion about something, especially one that is influenced by your emotions;

Emotion 1. (C;U) a strong human feeling such as love, hate, or anger

B. Choose the appropriate word from the above to fill in the gaps.
In some cases more than one choice is possible.

1. Sara usually tries to hide her _____.
2. A _____ of panic has spread over the country.
3. It was dark and he had completely lost his _____ of direction.
4. Don't worry. It won't hurt my _____if you change your mind.
5. My parents had mixed _____about all the changes.
6. Parents feel a mixture of _____when their first child starts school.
7. She has a good _____of smell.
8. Kids have a natural _____of justice.

GRAMMAR FOCUS

Which form of the verb is correct?

Choose the answer (A, B, C or D) that best completes the sentence.

THE SKIN SENSES
The skin (1) _____ the largest sense organ, with numerous nerve receptors distributed in varying concentrations throughout its surface. The nerve fibers from these receptors (2) _____ to the brain.

Skin receptors give rise to what (3) _____ as the cutaneous sensations of pressure, temperature, and pain. Research (4) _____ a simple connection between the various types of receptors and these separate sensations.
Because the brain (5) _____ complex information about the patterns of activity on many different receptors to detect and discriminate among skin sensations, a direct connection between receptors and sensations has so far eluded researches.

1.	A. has	B. there is	C. is	D. has been
2.	A. travel	B. travelling	C. are traveling	D. traveled
3.	A. knows	B. has known	C. are known	D. know
4.	A. is establishing	B. has established	C. has not established	D. will establish
5.	A. use	B. uses	C. used	D. is used

LANGUAGE IN USE

Use the word given in parentheses to form a word that fits in the numbered space. There is an example at the beginning.

PAIN

People have varying degrees of (o) sensitivity (**sense**) to pain. The most commonly accepted (1)_____ (**explain**) of pain is the gate control theory which holds that a (2)"_____ (**neurology**) gate" in the spinal cord controls the (3) _____ (**transmit**) of pain impulses to the brain. Studies of pain relief suggest that the (4) _____(**exist**) of the placebo effect, which occurs when a pain (5) _____(**suffer**) feels relief from pain when given a chemically neutral substance but told that it is an (6) _____ (**effect**) pain reliever.

Group projects

Suggested topics: Color Vision (hue, saturation, and brightness); Color Vision in Other species; Theories of Hearing; Smell and Taste; Kinesthetic and Vestibular Senses; The Skin Senses, etc.

Sites to explore:

http://www.colormatters.com/seecolor.html
http://www.colormatters.com/science.html
http://www.indiana.edu

Chapter 2
PERCEPTION

WARM-UP

There are several ways in which the brain interprets the complex flow of information from the various senses and creates perceptual experiences that go far beyond what is sensed directly.

How do we perceive the world around us?

- Look at the illustrations below. How does our visual system interpret them? With a partner try to explain why the visual system may interpret them the way it does.

a. 

b. 

- **Discuss your ideas in a brief plenary.**

LISTENING

Pre-listening

You will hear a part of a lecture titled *Perceptual Organization* where some of the principles of perceptual organization will be discussed.

Guessing vocabulary from context

A. The items in the task below contain some important vocabulary from the lecture. Each of the terms is *in boldface* in the context in which you will hear it. Work with a partner. Take turns explaining what you think each word means, based on its context (or suggest a Russian equivalent). In some cases you may be able to give only a general idea, but this can still contribute to your overall understanding of the term. For example, is it a noun or a verb? Does it mean something good or something bad?

1. The Gestalt psychologists believed that the brain creates a **coherent** perceptual experience ____
2. In one important **facet** of the perceptual process, we distinguish figures from the ground against which they appear. ____
3. The figure-ground **distinction** refers to all our senses ____
4. there are not enough **cues** in a pattern to permit us to easily distinguish a figure from its ground ____
5. This is the principle behind camouflage – to make a figure **blend into** its background. ____
6. It is unclear which part of the stimulus is the figure and which is the ground. Examples of such **reversible** figures could be a vase and the silhouettes. ____
7. We tend to see whole objects and hear meaningful sounds rather than just **random** bits and pieces of raw sensory data. ____

B. Match the vocabulary terms in A with their definitions by writing the letters in the blanks.

a. if something is like that, it can be changed back to how it was before
b. a clear difference or separation between two similar things
c. clear and reasonable
d. happening or chosen without any definite plan, aim, or pattern
e. an action or event that is a signal for something else to happen
f. two or more things mix and become similar so that you do not notice them
g. one of several parts of someone's character, a situation etc (= aspect)

While-listening

The following is an incomplete summary of the lecture. Read the summary and think about what kinds of words or phrases might go in the blanks. Do not write anything yet.

One important way our perceptual processes work is through distinguishing (1) _____figures from the (2) _____ground against which they appear. The figure-ground distinction, first noted by (3) _____ _____Gestalt psychologists, refers to all our senses, not just (4) _____vision. For instance, a (5) _____ _____violin solo stands out against the "ground" of a symphony orchestra. When we use sensory information to create perceptions, we fill in the missing information, group (6) _____ _____various objects together, see (7) _____whole objects, and hear meaningful sounds.

Now listen to the lecture. Take notes in your own note-book. Remember, it is not necessary to write down everything that you hear. Use the summary in the box as a guide to help you listen for the important points.

Use your notes to complete the summary.

Compare summaries with a partner.

READING

A. You are going to read a text about how we perceive movement. Use the table below to think about the topic. What do you know about it? What mechanisms are involved in this process? Share your ideas with a partner.

Things I know about the topic	Things I don't know	Things I'm not sure about
1. 2.	1. 2.	1. 2.

B. Read the text and say if there is new information in it.

PERCEIVING MOVEMENT

The perception of movement is a complicated process involving both visual information from the retina and messages from the muscles around the eyes as they follow an object. At times, our perceptual processes play tricks on us, as we think we perceive movement when the objects we are looking at are, in fact, stationary. We must distinguish, therefore, between real and apparent movement.

Real movement refers to the physical displacement of an object from one position to another. The perception of real movement depends only in part on the movement of images across the retina of the eye. If you stand still and move your head to look around you, the images of all the objects in the room will pass across your retina. You will probably perceive all the objects as stationary. Even if you hold your head still and move only your eyes, the images will continue to pass across your retina. But the messages from the eye muscles seem to counteract those from the retina, so the objects in the room will be perceived as motionless.

The perception of real movement seems to be determined less by images moving across the retina than by how the position of objects changes in relation to a background that is perceived as stationary. When we perceive a car moving along a

street, for example, we see the street, the buildings, and the sidewalk as a stationary background and the car as a moving object. Remarkably, the brain can distinguish these retinal images of an object moving against an immobile background from all the other moving images of the retina.

The perception of real movement is highly accurate. Imagine that you are watching a videotape of someone lifting a box of unknown weight. Research indicates that you would probably be able to predict the weight of the box fairly accurately, and you would probably also be able to tell if the person lifting the box was simply pretending it was heavier than it was. Moreover, there is some evidence that we may be specially equipped to detect biological movement, the movement of another human body. To demonstrate this, one researcher attached lights to various parts of a person's body and then filmed movement of the lights in an extremely dark room. People watching the film were immediately able to tell that the lights in motion were really a human body in motion, even though they saw part of the film for only a fraction of a second.

Apparent movement occurs when we see movement in objects that are actually standing still. One form of apparent movement is referred to as the autokinetic illusion – the perceived motion created by a single stationary object. If you stand in a room that is absolutely dark except for one tiny spot of light and stare at the light for a few seconds, you will begin to see the light drift. In the darkened room, your eyes have no visible framework; there are no cues telling you that the light is really stationary. The slight movements of the eye muscles, which go unnoticed most of the time, make the light appear to move.

Another form of illusory movement is stroboscopic motion – the apparent motion created by a rapid series of still images. This form of apparent movement is illustrated best by a motion picture – which is not in motion at all. The film consists of a series of still pictures showing people and objects in slightly different positions. When the separate images are projected sequentially onto a screen at a specific rate of speed, the people and objects seem to be moving because of the rapid change of one still picture to the next.

Another common perceptual illusion, known as the phi phenomenon, occurs as a result of stroboscopic motion. When a light is flashed on at a certain point in a darkened room, then flashed off, and a second light is flashed on a split second later at a point a short distance away, most people will perceive these two separate lights as a single spot of light moving from one point to another. This perceptual process

causes us to see motion in neon signs where words appear to move from one side to the other as different combinations of stationary lights are flashed on and off.

C. Read the text again and say if the following statements are true or false.

1. The perception of real movement depends only on the movement of the images across the retina of the eye.
2. If the images of the objects you can see around you pass across your retina, you will perceive those objects as moving.
3. Changes in the position of objects against a stationary background directly influence our perception of real movement.
4. The perception of apparent movement is highly accurate.
5. People prove to be extremely good at recognizing biological movement, the movement of another human body.
6. Apparent movement caused by flashing lights in sequence is called autokinetic illusion.
7. Apparent movement that results from flashing a series of still pictures at a rapid speed is known as stroboscopic motion.

D. Make a glossary of the necessary technical words and other useful vocabulary to describe the difference between real and apparent movement. Share with a partner.

GRAMMAR FOCUS 1

Look at the underlined nouns in each sentence. Circle the noun that is incorrect. Write the correct form of the nouns you have circled.

Example Size, shape, (bright) , and color constancies help us understand and relate to the world better.

You should circle 'bright' because the noun form is brightness.

1. Memory and experience play an important part in perceptual constancy.
2. In addition to past experience and learn, several personal factors color our perception.
3. Our familiar with a symbol or object affects our expectation of how the object should look.
4. Our perceptions are also influenced by our individual ways of dealing with environment and by our cultural background, values, motivated, personality, and cognitive style.

5. Visual illusions occur when we use a variety of sensory cues to create perceptual experiences that do not actually exist.
6. An example of physical illusions is the bent appearance of a sticks when placed in water.
7. Perceptual illusions depend on our own perceptual processes and occur because the stimulus contains misleading cues.
8. One important ways our perceptual processes work is through distinguishing figures from the ground against which they appear.

GRAMMAR FOCUS 2

Structure

1. We can perceive distance and depth through	a. aerial perspective, elevation, texture gradient, shadowing, and motion parallax.
2. Superposition is a monocular distance cue in which one object,	b. for the different images each eye receives.
3. Linear perspective is another monocular cue to distance and depth based	c. monocular cues, from one eye, or binocular cues, which depend on the interaction of both eyes.
4. Other monocular cues include	d. by partly blocking a second, appears closer.
5. With binocular cues, the stereoscopic vision makes	e. over animals whose vision is limited to monocular cues.
6. Retinal disparity is responsible	f. as loudness and distance require only one ear.
7. Convergence is another	g. perception of depth and distance clearer.
8. Humans and apes with the ability to use binocular cues have a distinct advantage	h. on the collaboration of both ears.
9. Sounds, too, add to our sense of space. Monaural cues such	i. on the fact that two parallel lines seem to come together at the horizon.
10. Binaural cues depend	j. binocular cue.

Below is a paragraph *Perceiving Distance and Depth*. Match the beginnings of the sentences from the left column with their continuations from the right column.

CHECK BACK

1. The process that involves converting physical energy into nerve impulses is referred to as _____.
2. Match the following terms with their definitions:

_____ cornea	a. colored part of the eye
_____ pupil	b. center of the visual field
_____ iris	c. receptor cell responsible for color vision
_____ lens	d. protective layer over front part of the eye
_____ fovea	e. contains the receptor cells that respond to light
_____ retina	f. focuses light onto the retina
_____ rod	g. receptor cell responsible for night vision
_____ cone	h. opening in the iris through which light enters

3. The process whereby the rods and cones adjust to lower levels of illumination is known as _____.
    a. dark adaptation
    b. light adaptation
4. The place in the retina where axons of all the ganglion cells come together to leave the eye is called the _____.
    a. fovea
    b. blind spot
    c. optic chiasm
    d. visual cortex
5. Placebos and acupuncture may affect the sensation of pain by _____.
    a. closing the pain gate
    b. releasing endorphins
    c. blocking pain receptors in the skin
6. The process by which we create meaningful experiences out of the jumble of sensory information is called _____.
7. In the case of reversible figures, we have difficulty distinguishing the _____ from the _____ behind it.
8. Match the following principles of perception with their definitions:

_____ similarity	a. tendency to perceive a whole object even where none exists
_____ continuity	b. elements that continue a pattern are likely to be seen as part of the pattern
_____ proximity	c. objects that are like one another tend to be grouped together
_____ closure	d. elements found close together tend to be perceived as a unit

9. The perception of loud sounds as being closer than faint sounds is a common _____ cue to sound localization.
    a. monaural
    b. binaural

10. Examine a few passages of your favorite song. Explain how the Gestalt principles of organization (proximity, similarity, closure, etc.) operate in the perception of music.

GROUP PROJECTS

Suggested topics: Observer Characteristics: Individual Differences and Culture; Perceptual Organization; How Do We See Objects and Shapes? Perceptual Constancies; Perceiving Distance and Depth; Visual Illusions; Special Effects in Cinema, etc.

Sites to explore:
http://en.wikipedia.org/wiki/Illusion
http://www.pbs.org/wgbh/nova/specialfx/sfxhome.html

SCIENCE IN THE NEWS

Read the two passages and say if the following statements are true, false or not mentioned

1. За женщинами не зря закрепилась репутация болтушек. Шотландские исследователи выяснили, что женская речь значительно богаче и образнее мужской, независимо от образования. Дело в том, что зоны головного мозга, ответственные за лингвистические способности, у женщин развиты в среднем сильнее, чем у мужчин. А вот зоны, отвечающие за абстрактное мышление и логического построения больше развиты у мужчин. Исключения из этого правила редки – всего 5-8 человек на сотню.

1. It is not by chance that women are considered to be great talkers.
2. Scottish researches found out that women on average are better educated than men.
3. The researches conducted their experiments all over Great Britain.
4. Women are as good at abstract thinking as men.

2. Скептики скажут, что письмо – это просто работа мышц. Но это не так. Почерк – это внешнее проявление индивидуальных черт характера и ума. Если бы почерк был лишь результатом работы мышц, он бы не раскрывал человеческих эмоций. Бывали случаи, когда человек повреждал себе правую руку, в результате ему приходилось обучаться писать левой. И хотя, на первый взгляд слова, написанные левой рукой, отличаются от тех, что написаны

правой, при внимательном сравнении открываются те же основные черты почерка человека. Более того, даже у людей, потерявших обе руки и научившихся писать ногами, проявляются те же закономерности характера.

Одним из самых новых и важных направлений в исследовании почерка стало использование полученных под гипнозом образцов письма пациента. Когда взрослым людям внушали, что они в детском возрасте, их почерк менялся, и они начинали писать, как дети. Благодаря тому, что стало возможным анализировать почерк человека в различном возрасте, можно проследить его эмоциональное и интеллектуальное развитие от детского до взрослого состояния. Другие интересные эксперименты связаны с обнаружением признаков болезней, которые проявляются в характере почерка. Эти тесты проводятся профессиональными графологами, работающими в больницах вместе с врачами. Когда будут получены окончательные результаты исследований, они, вероятно, окажут существенную помощь врачам.
(И.А. Улезько *Характер и почерк*)

1. Handwriting reveals people's traits of character.
2. It is easy to describe a person's character just looking at his/her handwriting.
3. Graphology is taught at Medical Schools.
4. While under hypnosis some adults are able to change their handwriting as if they were children.
5. Doctors diagnose patients by examining their handwriting.

UNIT 4
STRESS AND HEALTH PSYCHOLOGY

Chapter1
UNDERSTANDING STRESS

WARM-UP
(РИСУНОК/ФОТО НОВОРОЖДЁННОГО)

1. How can you relate the picture to the topic “Stress”?
2. Can you think of some other life events that cause stress?

READING 1
Pre-reading

A. Study the table below. Which word is most often used in it? Why?

Social Readjustment Rating Scale

Life event	**Life-Change Units**
Death of one’s spouse	100
Divorce	73
Personal Injury or illness	53
Marriage	50
Being fired at work	47
Pregnancy	40
Gain of a new family member	39
Change in one’s financial state	28
Death of a close friend	37
Change in responsibilities at work	29
Son or daughter leaving home	29
Outstanding personal achievement	28
Beginning or ending school	26
Change in living conditions	25
Trouble with one’s boss	23
Change in residence	20
Change in schools	20
Change in sleeping habits	16
Change in eating habits	15
Vacation	13

(*For your information:* The SRRS assigns "life-change units" to several dozen stressful situations. The events in the table are assigned a point value depending on the amount of change they require.)

B. Give your own definition of stress using the information in the table.

C. Match the words on the left with their translations on the right.

1. to adjust	a. угроза
2. tension	b. предвидеть
3. to anticipate	c. мелкие неприятности
4. fatigue	d. напряжение
5. threat	e. расстройство, фрустрация
6. hassles	f. утомительный, изнурительный
7. frustration	g. приспосабливаться
8. to alleviate	h. знак, признак
9. token	i. облегчать
10. exhausting	j. усталость

While- reading
(Pair work)

1. **Write questions you expect the text to provide answers to knowing that the title of the reading text is *STRESS.***
2. **Scan the text to see if it contains answers to your questions.**

STRESS

When Janet Garcia had her first baby at age 34, she was filled with special joy because she had feared she would never become pregnant. But she found taking care of the baby, on top of all her other responsibilities, exhausting. Her husband, Michael, resented her constant fatigue and the fact that he didn't come first in her life anymore. To alleviate the situation, Janet and Michael drew on their savings to pay for household help and Michael took a more active role in looking after the baby. These measures relieved some of Janet's burden, leaving her with more time and energy for her other responsibilities and for her life with Michael.

First of all, this story involves some degree of stress – that is, the people in it encountered significant new demands from their environments that gave rise to a state of tension or threat.

Second, the people under stress had to find ways to cope with these new events. Finally, they adjusted about as well as could be expected under the circumstances.

Every adjustment is an attempt – successful or not – to balance our desires against the demands of the environment, to weigh our needs against realistic possibilities, and to cope as well as we can within the limits of our situation.

How we adjust to the stresses – both major and minor – that we encounter is crucial to our health and the quality of our lives. Stress can contribute to both psychological and physical illness. In fact, some medical experts believe that all physical ailments, from colds to ulcers to cancer, have a psychological as well as physical component. For this reason, stress and its effects on people's lives is a key focus of health psychology**,** a subfield of psychology concerned with the relationship between psychological factors and physical health and illness. Health psychologists seek to understand the relationship between stress and illness: Why do some people manage stress well enough to remain healthy? Why do others become ill? Can personality traits influence recovery from serious illness? How can we promote healthy behaviors? To answer these questions, they study the interaction of biological, psychological, and social factors.

Stress refers to any environmental demand that creates a state of tension or threat and requires change or adaptation. Many situations prompt us to change our behavior in some way. We stop our car when a traffic light turns red; we switch television channels to avoid a boring program and find an interesting one to watch; we go inside when it starts to rain. Normally, these situations are not stressful because they are not accompanied by tension or threat. Now imagine that when the light turned red you were rushing to make an important appointment, or that the person watching TV with you definitely does not want to switch the channel, or that you are about to host a large outdoor party when it starts to rain. Now these situations can be quite stressful.

Some events, such as wars and natural disasters, are inherently stressful, because the danger is real. But even in inherently stressful situations, the time of greatest stress is not necessarily the time when danger is most imminent. We feel the most stress when we're *anticipating* the danger. Parachutists, for example, report feeling most afraid as the time for the jump approaches. Once they are in line and cannot turn back, they calm down. (Epstein, 1962)

Of course, stress is not limited to life-and-death situations, not even to unpleasant or tension-filled experiences. Even good things can cause stress, because they require us to change or adapt in order to meet our needs (Morris, 1990). A wedding is stressful as well as exciting. Being promoted is gratifying – but it demands that we relate to new people in new ways, learn new skills, perhaps dress differently or work longer hours.

Post-reading

1. **Does the text answer all your questions? If not, discuss them with the group in a plenary.**
2. **The text begins with the story about Janet Garcia. Do you know any other stories in which people found themselves in stressful situations? How did they cope with stress?**
3. **From the SRRS table choose two or three life events. With your fellow student(s) discuss what changes each event can cause.**

READING 2

A. Scan the text and match the following headings with the passages they go with.

FRUSTRATION HASSLES CONFLICT PRESSURE CHANGE SELF-IMPOSED STRESS
FACTORS CAUSING STRESS

(A)_____ All of the stressful events we have considered involve change. Most people have a strong preference for order, continuity, and predictability in their lives. Therefore, they experience any event, good or bad, that brings about change as stressful. By the same token, the amount of change various situations require denotes how stressful they are.

(B) _____ Much stress is generated by "hassles", life's petty annoyances, irritations, and frustrations. Such seemingly minor matters as being stuck in traffic, misplacing car keys, and getting into a trivial argument may be as stressful as the major life events. Lazarus believes that big events matter so much because they trigger the little hassles that eventually overwhelm us with stress. People who have recently suffered a major traumatic event are more likely to be plagued by minor stressors or hassles than those who have not experienced a recent trauma.

In short, both major and minor events are stressful because they lead to feelings of pressure, frustration, conflict, and anxiety. We turn now to the ways that these emotional experiences contribute to our overall feeling of stress.

(C) _____ occurs when we feel forced to speed up, intensify, or shift direction in our behavior, or when we feel compelled to meet a higher standard of performance (Morris, 1990). Pressure may come from within – as when we push ourselves to reach personal standards of excellence. Outside demands also cause pressure: We compete for grades, for popularity, for sexual and marital partners, and for jobs. In addition, we're pressured to live up to the expectations of our family and close friends.

(D) _____ occurs when a person is prevented from reaching a goal because something or someone stands in the way. A high school student who does poorly on his college boards does not get into his father's alma mater; a woman looking forward to a well-deserved promotion is denied it for sexist reasons. These people must either give up their goals as unattainable, modify their goals, or find some way to overcome the obstacles blocking their way.

Morris (1990) identifies five common sources of frustration in American life. *Delays* are annoying because our culture puts great stock in the value of time. *Lack of resources is* frustrating to those Americans who cannot afford the new cars or lavish vacations that that the mass media tout as every citizen's due. *Losses,* such as the end of a love affair or a cherished friendship, cause frustration because they often make us feel helpless, unimportant, or worthless. *Failure* generates intense frustration – and accompanying guilt – in our competitive society. Because we imagine that if we had done things differently, we might have succeeded, we feel responsible for our own or someone else's pain or disappointment. *Discrimination* also frustrates us: Being denied opportunities or recognition simply because of one's sex, age, religion, or skin color is immensely frustrating.

(E) _____ Of all life's troubles, conflict is probably the most common. A student finds that both the required courses she wanted to take this semester are given at the same hours on the same days. A boy does not want to go to his aunt's for dinner, but neither does he want to listen to his parents complain about his decision if he stays at home.

Conflict arises when we face two or more incompatible demands, opportunities, needs, or goals. We can never resolve conflict completely. We must either give up some of our goals, modify some of them, delay our pursuit of some of them, or resign ourselves to not attaining all of our goals. Whatever we do, we are bound to experience some frustration, which adds to the stressfulness of conflicts.

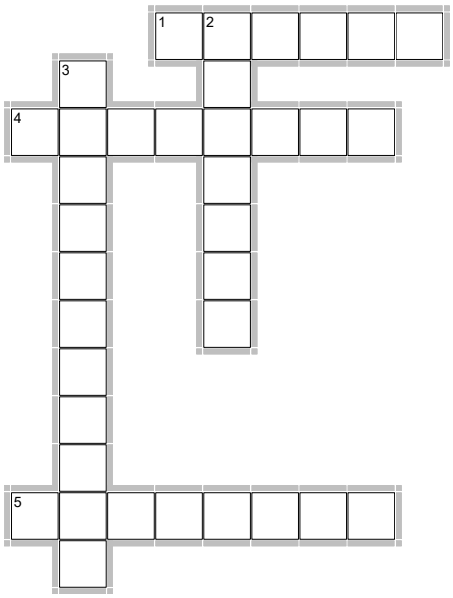
(F) _____ People sometimes create problems for themselves quite apart from stressful events in their environment. For example, some people believe "It is essential to be loved or approved by almost everyone for everything I do", or "I must be competent, adequate, and successful at everything I do". When things don't go perfectly, such people feel upset, miserable, and unhappy.

B. Read the text again and make a list of the words describing feelings that people experience in stressful situations. Use some of these words to speak about the examples from the text or real life.

C. In small groups make a diagram/poster on factors causing stress. Share it with the rest of the class.

D. You have read about the common sources of frustration in American life. What are the most common sources of frustration in Russia?

E. Do the crossword puzzle *Factors that cause stress*



Across

1. it occurs as a result of the events that make a person's life different
4. it is a condition when we are forced to intensify your efforts, to perform at a higher level, or to change our behaviour.
5. simaltenious existence of opposite demands, opportunities, needs, or goals

Down

2. minor struggles that lead to stress
3. we experience this feeling when there is an obstacle for reaching our goals

VOCABULARY FOCUS

A. Match the following phrasal verbs with their explanations.

1. draw on (one's savings)	a. to do as well as you can to meet a standard, etc
2. bring about	b. to succeed in dealing with a problem
3. look after	c. to cause to happen
4. cope with	d. to remove money from one's bank account
5. calm down	e. to be excited about smth that is going to happen
6. look forward to	f. to become quiet
7. live up to	g. to take care of

B. Use an appropriate word from the box to complete each sentence.

adjustment frustration to anticipate to look forward to to draw on fatigue to live up to

1. Hard work or exercise can cause _____.
2. Each response is an _____ to failure, although some of these responses will probably be less constructive than others.
3. The boxer _____ the blow, saw it coming and blocked it.
4. Even minor problems lead to feelings of _____ and anxiety.
5. We cannot pay for her treatment unless we _____ the necessary sum of money.
6. My mother says she's _____ meeting you.
7. The film has certainly_____ my expectations.

C. Word families

Complete the chart.

Verb	Noun	Adjective
	frustration	
demand		
	behavior	
		depressing
cause		
		stressful
	annoyance	
change		
	irritation	
		predictable

GRAMMAR FOCUS

A. Active or passive verb?

Choose the correct verb forms in the sentences below.

1. Gender differences <u>have studied/have also been studied</u> in relation to stress and coping.

2. Heredity influences our risk of developing CHD (coronary heart disease), but even among identical twins, the incidence of CHD is closely linked/links to attitudes toward work, problems in the home, and the amount of leisure time available.
3. However, the women in this study experienced/were experienced greater stress than men when problems developed in long-term relationships, largely because they were more committed to their personal and professional relationships than the men were.
4. In other animal experiments, cancer was diagnosed earlier and death occurred sooner in mice that received frequent shocks under conditions that made/were made escape impossible than in mice that were allowed to cope with the stress of shocks by escaping.
5. Chemotherapy and radiation treatments can suppress immune function, so patients who are depressed/depress at their diagnosis must deal with a double blow to the immune system.
6. Exactly why the presence of a strong social support system is related to health is not fully understood/does not fully understand.
7. Yet not everyone who is exposed to severely stressful events such as heavy combat or childhood sexual abuse develops/is developed PTSD (post-traumatic stress disorder).
8. A person deemed well adjusted by one standard may not adjudge/not be adjudged so by other criteria.

B. In this exercise you have to read a sentence and then write another sentence with the same meaning using an infinitive.
Example: *It appears that individual characteristics predispose some people to PTSD (post-traumatic stress disorder).*

Individual characteristics appear to predispose some people to PTSD.

1. It appears they are dealing with their problems, but in fact they are not because they have cut themselves off from their emotions.
2. It turned out that men and women were affected equally when stress was measured physiologically.
3. It is known that high heart rate and high blood pressure contribute to CHD (coronary heart disease).
4. It was likely that people who developed cancer, also got fatigued and felt helpless.
5. It appears that combat veterans are especially vulnerable to PTSD.
6. It is most likely heavy combat and childhood sexual abuse trigger this disorder.

Chapter 2
HEALTH PSYCHOLOGY

WARM-UP

What does, “If you’ve got your health, you’ve got everything,” mean?

READING FOR GIST

Read the text, entitle each part of it and answer the questions (1-6) after the text.

HOW STRESS AFFECTS HEALTH

1. _____ The Canadian physiologist Hans Selye (1907-1982) contended that we react to physical and psychological stress in three stages he called the **general adaptation syndrome** (GAS). These three stages are alarm reaction, resistance, and exhaustion.

Stage 1, *alarm reaction*, is the first response to stress. It begins when the body recognizes that it must fend off (keep at a distance in case of threat) some physical or psychological danger. Activity of the sympathetic nervous system increases, resulting in the release of hormones from the adrenal gland. We become more sensitive and alert, our respiration and heartbeat quickens our muscles tense. These changes help us to mobilize our coping resources in order to regain self-control. At the alarm stage, we might use either direct or defensive coping strategies. If neither of these approaches reduces stress, we enter the second stage of adaptation.

During stage 2, *resistance,* physical symptoms and other signs of strain appear as we struggle against increasing psychological disorganization. We rely more strongly on both direct and defensive coping techniques. If we then feel less stress, we return to a more normal state. But if the stress is extreme or prolonged, we may turn in desperation to inappropriate coping techniques and cling to them, despite the evidence that they are not working. When that happens, we deplete (reduce) our physical and emotional resources, and signs of psychic and physical wear and tear (damage) become more apparent.

In the third stage, *exhaustion,* we draw on ineffective defense mechanisms in an attempt to bring the stress under control. Some people lose touch with reality and show signs of emotional disorder or mental illness at this stage. Others show signs of “burnout”, including inability to concentrate, procrastination, and a cynical belief that nothing is worthwhile. Physical symptoms such as skin or stomach problems may erupt. Some victims of burnout turn to alcohol or drugs to cope with the stress-

induced exhaustion. If the stress continues, the person may suffer irreparable physical or psychological damage or even death.

2._____ Stress is a major contributor to coronary heart disease (CHD), the leading cause of death and disability in the United States. The incidence of CHD is closely linked to attitudes toward work, problems in the home, and the amount of leisure time available.

Mental stress predisposes a person to CHD. Blood flow to the heart decreases dramatically (a condition known as *myocardial ischemia)* immediately following mental stress in people who show signs of cardiac disease. Generally, life stress and social isolation are significant predictors of mortality (subject to death) among those who have suffered heart attacks for whatever reason.

3._____ The relatively new field of *psychoneuroiimmunology* studies the interaction between stress on the one hand and immune, endocrine, and nervous system activity on the other.

The immune system defends the body against invading substances, or antigens, such as bacteria, viruses, and other microbes. It does so primarily with the help of white blood cells called *lymphocytes.* To the extent that stress disrupts the functioning of the immune system, it can impair health. In fact, stress associated with college exams and with depression has been linked to suppress functioning of the immune system. Chronic stress, such as caring for an elderly parent or living in poverty, also compromises the body's defenses. Increased stress may also make us more susceptible to upper respiratory infections such as the common cold.

Prolonged stress may even increase vulnerability to cancer. Stress does not cause cancer, but it impairs the immune system so that cancerous cells are better able to establish themselves and spread throughout the body.

4._____ In extreme cases, severely stressful events can cause a psychological disorder known as *post-traumatic stress disorder(PTSD).*Dramatic nightmares in whish the victim reexperiences the terrifying event exactly as it happened are common. So are *flashbacks,* in which the victim relives the trauma. Often, victims of PTSD withdraw from social life and from job and family responsibilities.

Combat veterans appear to be especially vulnerable to PTSD. More than one-third of men involved in heavy combat in Vietnam showed signs of serious PTSD. Many veterans of World War II, old men now, still have nightmares from which they awake sweating and shaking.

Yet not everyone who is exposed to severely stressful events such as heavy combat or childhood sexual abuse develops PTSD. Individual characteristics including gender, personality, a family history of mental disorders, substance abuse among relatives, and even preexisting neurological disorders appear to predispose some

people to PTSD more than others. Recovery from PTSD is strongly related to the amount of emotional support survivors receive from family, friends, and community.

1. What does GAS stand for?
2. What are the stages the body passes through as it adapts to stress and what are they characterized by?
3. What is the incidence of CHD connected with?
4. What does psychoneuroimmunology study?
5. What sort of changes does stress cause in the immune system and how do these changes affect health?
6. What is post-traumatic stress disorder? What kinds of events are most likely to trigger this disorder?

Give a summary of the text in no more than 50 words. The first and the last sentences of the summary have been done for you.

Each person goes through three stages when s/he adapts to stress.
_____
_____
_____
_____
_____
_____
_____ Extreme stress can result in PTSD.

VIDEO VIEWING (optional)
You are going to watch the scene from the film "Stepmom" in which Jackie and Luke (parents) are talking to their children (Anna and Ben) about their forthcoming divorce. Pay attention to:

- the differences in the children's behaviour when they hear the news and their reactions.
- what the parents say to reduce the children's stress.

What would you recommend the parents in this situation?

LISTENING

Pre-listening (brainstorm)

Below you can read about some of the ways to cope with stress. Write down as many other tips as possible to add to this list. Share your list with the rest of the class.

Prepare for the morning the night before · Spend 15-30 minutes a day doing something nice for yourself · Say thanks to a teacher · Remember that stress is an attitude.

While-listening

Listen to a part of a lecture about ways to cope with stress at college. Tick those you hear:

1. Give yourself a mental hug
2. Listen to your favorite music
3. Pay attention to what you eat
4. Go to the cinema for a change
5. Take exercise you like
6. Be prepared for rain
7. Believe in yourself
8. Plan things beforehand

Post-listening

In groups of 3 or 4 discuss the ways you personally use to cope with stress at university. Share your ideas with the rest of the class.

WRITING

Your friend Mary lives and studies in another city. You received a letter from her in which she complains about the pressure she is experiencing before the end of the term. She is saying she cannot cope with all the tasks she has to complete to be accredited. She is feeling worried and nervous. Write a letter to Mary and give her some advice as to what she can do to cope with this stressful situation.

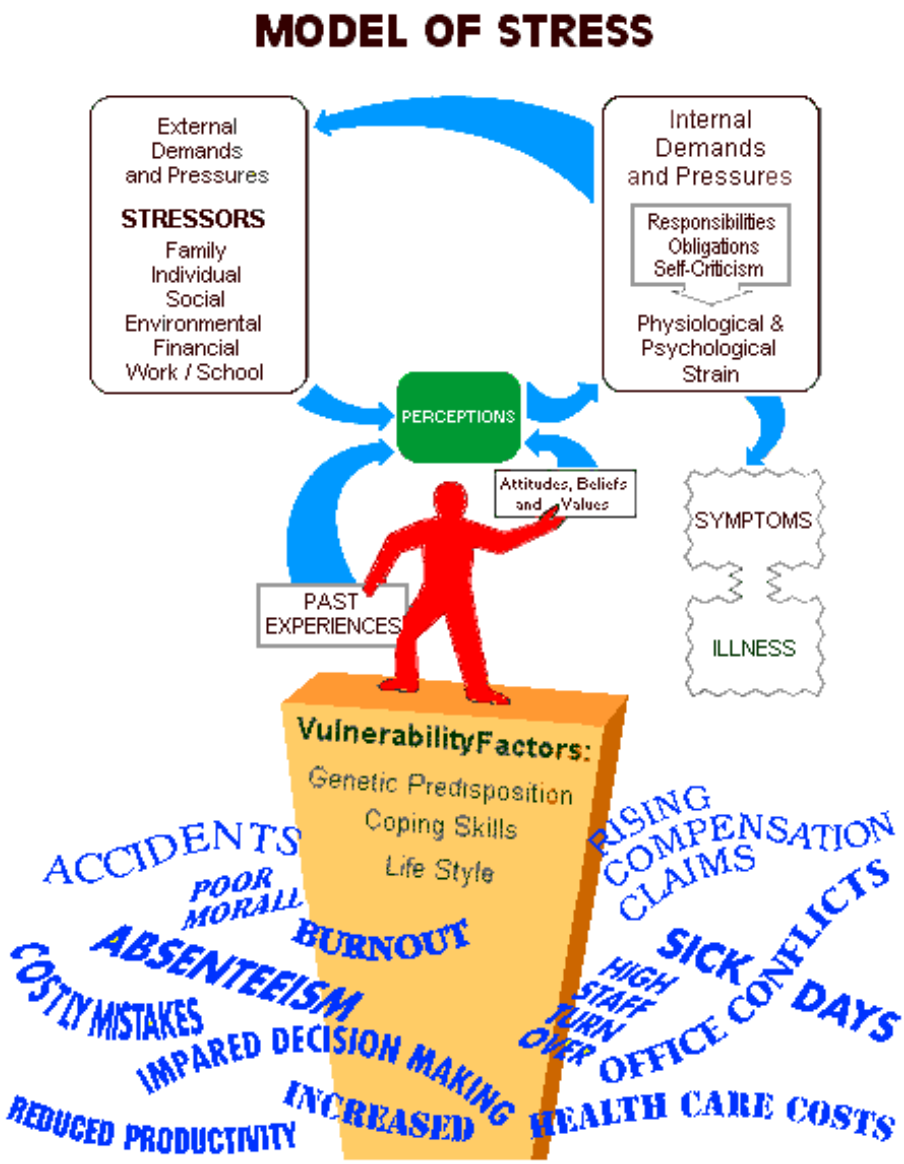
… *I'm feeling awful and tired now when the spring term is almost over and I can't catch up with all the tasks I have to do. I know it's my entire fault; I've been too lazy, I'm afraid. How do you cope with your studies? You mentioned you were attending a special program for reducing stress at your university.* *…*

Informal letter plan

	Dear _____
Paragraph 1	Thanks for your last letter. It was waiting for me when I got home from college on Friday.
Paragraph 2	You're saying you're feeling frustrated about your exam period.
Paragraph 3	
Paragraph 4	
Closing expression(s)	e.g. Give my love to … Say hello to…. See you soon! Hope to hear from you soon
Signing off	Love, Lots of love, Yours,
Your first name	

CHECK BACK

Study the following model of stress, comment on it drawing on the information from this unit.



SELF-STUDY

Prepare a short presentation on one of the topics given below or any other you may suggest.

- Stress and Individual Differences.
- Socioeconomic and Gender Differences in Coping with Stress.
- Direct and Defensive Coping.

The following examples can help you structure your presentation:
Recent research has found that…
Another study found that…
Research demonstrates, for example, that…

In subsequent research, Taylor and Jonathan Brown expanded on the idea that…
Taylor initially reached this conclusion after a 2-year study of…
We look briefly now at…
Still many investigators remain skeptical about…
According to…
Interestingly, intensive group therapy on patients may increase…

SCIENCE IN THE NEWS

Read the two articles and answer the questions to them:

Затяжной стресс, по мнению английских медиков, приводит к повышению в крови уровня кортизона, что ухудшает общее самочувствие, память и вызывает тяжелые депрессии. Избежать таких осложнений помогут пешие прогулки, теплые ванны, а также спокойные, снимающие нервное напряжение занятия, например, вязание.

1. What makes the levels of cortisone in blood rise?
2. How does a person feel when the cortisone levels in blood are high?
3. How can one avoid such complications?

Чего боятся россияне и почему страдают от депрессий

К 2020 году депрессия, по прогнозам специалистов, станет в нашей стране вторым по частоте заболеванием после болезней сердечно-сосудистой системы. С какими фобиями борется человек? Как россияне переживают стрессы и чрезвычайные ситуации? По словам психологов, фобии у людей самые разнообразные и зависят от тех жизненных условий, в которые попадает человек.

Например, многие боятся замкнутых пространств, поэтому не пользуются лифтами, а в кино и театрах выбирают места поближе к выходу. Кто-то, наоборот, испытывает страх перед открытым пространством и не может перейти реку по большому мосту, но спокойно сделает это на транспорте. Возникают страхи, связанные с терактами и другими чрезвычайными ситуациями. Но есть и более социально ориентированные страхи, например, потерять работу или тяжело заболеть. Такие страхи характерны больше для капиталистического общества.

На благополучное развитие страны, по наблюдениям специалистов, оказывает влияние количество в обществе эгоистов. Обычно они составляют одну треть, и если их число уменьшается, то общество начинает развиваться.

Необычайно теплая зима, по мнению специалистов, тоже не должна оказать сильного влияния на психологическое состояние россиян. Если количество депрессий и увеличилось, то ненамного, всего на 10 процентов, и проходили они в легкой форме: повышение раздражительности, снижение работоспособности, ухудшение настроения. Гораздо сильнее люди страдают от недостатка солнца.

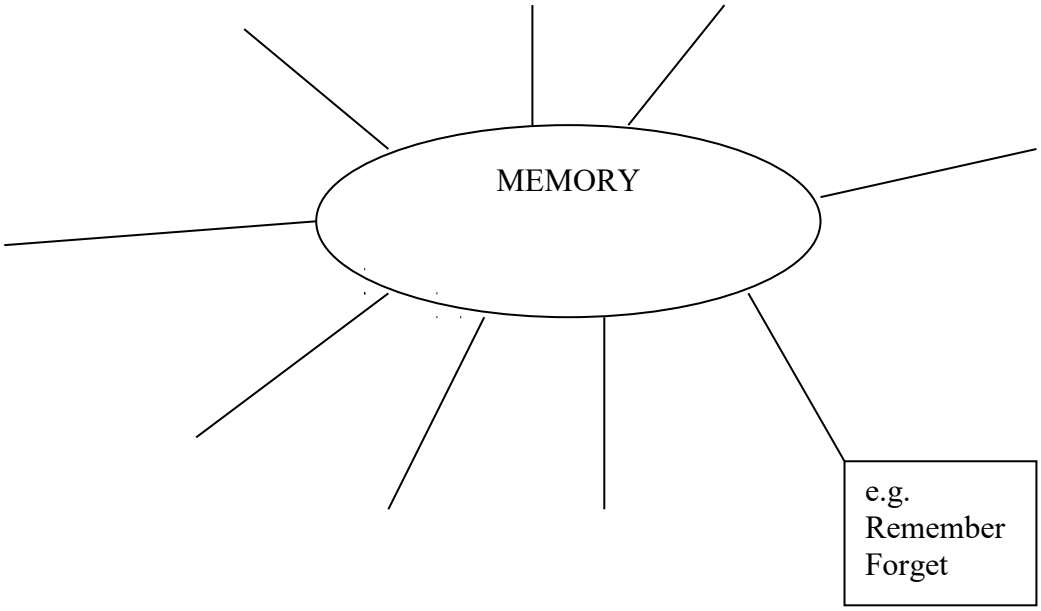
1. What will happen in our country by 2020 according to some specialists' predictions?
2. What kind of phobias and fears do people have?
3. What does that depend on? And how do people cope?
4. What do specialists say about egoists and their proportion to the rest of society?
5. How does the unusually mild winter affect Russians?

Unit 5
MEMORY

Chapter 1
TYPES OF MEMORY

WARM-UP

What comes to your mind when you hear the word "memory"?
In small groups complete the 'memory' mind-map, and then share your results with the rest of the class.



THINK ABOUT IT!

- **What is the basic difference between the words mind and brain?**
- **How do you understand the words and expressions in the box below?**

mindless; brainless; a brainwave; brainwashing; to have something on the brain; to have a good brain; to be out of one's mind; to rack one's brain; to be in two mind s about something.

- **In the following sentences replace the words in italics with a word or expression given above:**

- I've just had *a brilliant idea*!
- We *aren't sure* whether we should buy that house or not.
- You must be *mad* to give up such a well-paid job.
- I've *thought and thought about* it and I still can't remember where I put it.

READING

Pre-reading

A. Match the words on the left with their translations on the right. The first one is done for you.

1 to rehearse (h)	a. сырой, необработанный
2 to recall	b. выбрасывать, сбрасывать
3 to process	c. вспоминать
4 ability	d. возвращать
5 to retrieve	e.приобретать
6 raw	f. хранить
7 to fade away	g. обрабатывать
8 to discard	h. репетировать
9 sequence (n)	i. способность
10 to store	j. исчезать, стереться (в памяти)
11 to acquire	k. последовательность

B. Which five of these things in the list below do you think will be mentioned in the text?

1. Scientists have been trying to find answers to the questions about how memory works since the 19th century.
2. In one experiment, participants were given a 3-digit number and asked to count backwards.
3. Memory is a series of steps in which we process information.
4. Inaccuracies in eyewitness testimony present a challenge to both cognitive and forensic psychologists.
5. We sometimes find remembering easy and oftentimes very difficult.
6. Short-time memory stores and processes selected information.
7. After returning from the grocery store, you realize that you have forgotten to buy two of the things on your list.
8. There are things you intend to remember, but you also receive a lot of information that you never intended to remember.

While – reading

A. Scan the text to see if you were right.

B. Which major topics does the text deal with?

C. As you read the text, fill in the graph (after the text) which presents the information – processing model of memory.

MEMORY

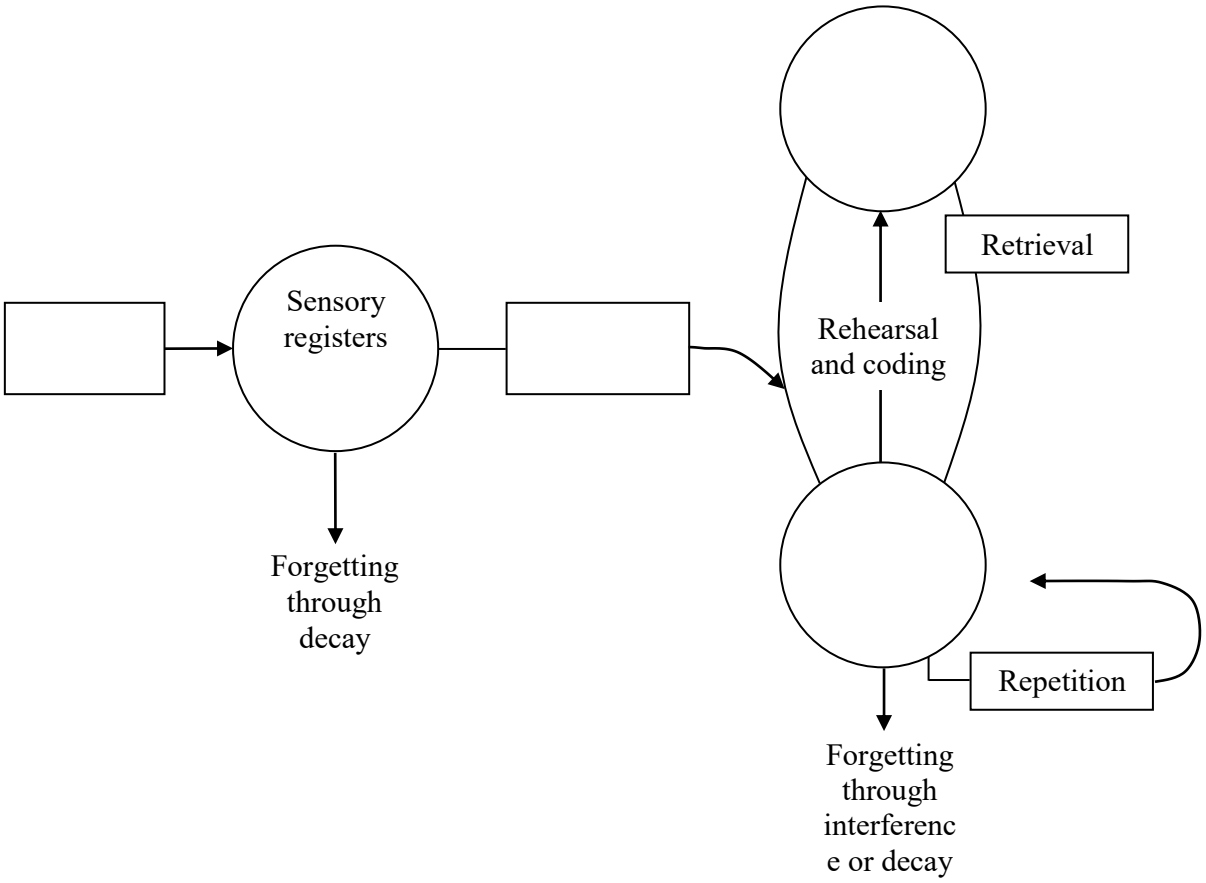
Accounts of people with extraordinary memories raise many questions about the nature of **memory.** Why are some people so much better at remembering things than others? Are they simply born with this ability, or could any of us learn to remember as much as these people do? And why is it that remembering may sometimes be so simple and other times so difficult? Why do we find it so hard to remember something that happened only a few months back, yet we can recall in vivid detail some other event that happened 10, 20, even 30 years ago? How does memory work, and what makes it fail? Among the first to seek scientific answers to these questions was the nineteenth century German psychologist Hermann Ebbinghaus. He composed lists of "nonsense syllables," meaningless combinations of letters, such as PIB, WOL, or TEB. He memorized lists of 13 syllables each. Then, after varying amounts of time, he tried to relearn each list of syllables. He found that the longer he waited after first learning a list, the longer it took to learn the list again. Most of the information was lost in the first few hours.

Today many psychologists find it useful to think about memory as a series of steps in which we process information, much like a computer stores and retrieves data. These steps form what is known as the **information-processing model** of memory. What is the sequence of information processing? Raw information flows from the senses into the sensory registers, where it fades away or is processed in terms of existing knowledge and information. Information that is determined to be meaningful is passed on for further processing in short-term memory (STM); the rest is discarded. In STM, information is either forgotten or transferred into long-term memory (LTM), where it can be stored and retrieved when necessary.

STM is also called *primary or working memory*. It briefly stores and processes selected information. STM has its limits. Researchers have found that it can hold only as much information as can be repeated or rehearsed in 1.5 to 2 seconds, which is usually 5 to 10 separate bits of information. We can process more information by grouping it into larger meaningful units, a process called *chunking.*
LTM is more or less permanent and stores everything we "know." **Semantic memory** is the portion of LTM that stores general facts and information in dictionary or encyclopedia form. Another facet of LTM, **episodic memory,** stores information rich with personal meaning.

The memories we have just considered are things you intended to remember. Psychologists call such memories **explicit memory.** But you also acquire a great deal of information that you never intended to remember. Perhaps you have had the experience of recalling exactly where on a page a particular piece of information

appeared, even though you did not to remember the item or its placement. Psychologists call such unintentional memories **implicit memory.**



Post-reading

A. Which type of memory is described in each case below?
Match the passages (1-4) with the types of memory they illustrate (a-d).

1. You remember what you ate for dinner last night; the date you were born; and what you are supposed to be doing tomorrow at 4p.m.

2. When you see the words George Washington, you call up all sorts of additional information from LTM: 1776, the first president, Father of the United States.

3. Have you ever misplaced something like a pair of glasses and then retraced your steps in an effort to find it? ”Let’s see, I came in the door, put down my keys, then I

went to the kitchen, where I put down the packages...” And then you go to the kitchen and find your glasses, although you may not actually have left them there.

4. This memory lets you “go back in time” to a childhood birthday party, to the day you got your driver’s license, to the story of how your parents met.

a) implicit; b) episodic; c) semantic; d) episodic

B. Match the following words with their explanations.

1 to retrieve	a. loss of memory
2 to repress	b. obstructing wholly or partially
3 storage	c. to make more efficient by simplifying
4 schema	d. collecting and keeping for future use
5 interference	e. to keep down, to suppress
6 amnesia	f. to find again
7 to streamline	g. a set of beliefs and expectations based on past experience
8 to comprehend	h. to bring back into the mind
9 to recall	i. to understand

C. Use one of the words from task 2 (1-9) to fill in the gaps in the text below.

STORAGE AND RETRIEVAL IN LTM

Most, if not all, of the information in LTM remains there more or less permanently, but we can't always _____ it when we need to, as the *tip-of-the-tongue phenomenon,* or TOT shows. Everyone has had the experience of knowing a word but not quite being able to _____ it. We say that such a word is "right on the tip of my tongue."

Researchers explain the loss of information from LTM by _____from competing information. Interference may come from two directions: In **retroactive interference,** new information interferes with old information already in LTM; **proactive interference** refers to the process by which old information already in LTM interferes with new information. Interference affects both _____ and retrieval of information.

Especially disturbing events may cause us to _____ memories or even to forget personal memories altogether (hysterical _____). Sometimes we "reconstruct" our memories for social or personal self-defense.

Recognizing that past reactions and experiences affect our present memory, researchers developed the _____ *theory*. A schema (plural: schemata) is a set of beliefs or expectations about something based on past experience, and it serves as a basis or standard for comparison with a new experience. Using schemata, we not only _____ and interpret present circumstances but also _____ our retrieval processes. Retrieval is also aided by extensive cues and links with other material in LTM.

VOCABULARY FOCUS

- **It is important to know which words collocate (which words commonly go together) and a good dictionary will tell you this. When you see good examples of collocation, underline or highlight them in the text.**
- **Look at these examples of collocations from the reading text *Memory.***
  *raise questions (*verb and noun collocation)
  meaningless combinations(adjective and noun collocation)
  store data (verb and noun collocation)
- **Look through the text again to find some more collocations to remember.**

GRAMMAR FOCUS 1

Comparing things in different ways

Which of the following sentences are correct? Correct the sentences that are wrong.

1. Try to keep that visual image as longer as you can.
2. Some people are many better at remembering things than others.
3. You will notice that your visual register took in far more information than you were able to retain for even a few seconds.
4. Could any of us learn to remember as much like people with extraordinary memories do?
5. He found that longer he waited after first learning a list, the longer it took to learn the list again.
6. We can process more information by grouping it into larger units.
7. He lifted her head, then turned her face to a slightly much comfortable position.
8. The more dissimilar something is from other things you have already learned, the less likely it will be to interfere with other material in memory.
9. One of the most successful and most widely used methods of studying written material was first developed at Ohio State University.
10. LTM is more or little permanent and stores everything we know.

GRAMMAR FOCUS 2
Asking questions

Ask What, Why, Who, How questions to the following passages.

e.g. Long-term memory is more or less permanent and stores everything we "know". *Semantic* memory is the portion of LTM that stores general facts and information in dictionary or encyclopedia form. Another facet[14] of LTM, *episodic* memory, stores information rich with personal meaning.

What do we call the portion of LTM that stores general information?
How is general information stored by semantic memory?

- Information that we deal with enters *short-term* memory, also called *working* memory. STM contains everything that we are consciously aware of at any

[14] part

moment. STM not only briefly stores information but also processes that information further.

- STM has its limits. Researchers have found that STM can hold only as much information as can be repeated or rehearsed in 1.5 to 2 seconds, which is usually 5 to 10 separate bits of information. We can process more information by grouping it into larger meaningful units, a process called *chunking*.
- Scientific research on memory began with Ebbinghaus's experiments in the nineteenth century. Today the information-processing model of memory describes how information is encoded, organized, and stored in memory, and how it is retrieved from memory.
- Some people with extraordinary memory possess or use *eidetic* imagery, the ability to reproduce unusually sharp and detailed images of a scene. Mnemonists are individuals who use memory techniques to develop extraordinary memory skills.
- One key to improving memory lies in organizing and coding information more effectively when we first place it in LTM. Techniques called mnemonics provide ready-made ways to impose order on new information, such as rhymes and jingles used for remembering facts.

READING AND LISTENING

Read and listen to an extract from the book "A Prayer for Owen Meany" by John Irving. In small groups discuss which type of memory is described in it? What can we compare it with? Give a definition of this type of memory.

The crack of the bat was so unusually sharp and loud for a Little League game that the noise captured even my mother's attention. She turned her head –I guess, to see who had hit such a *shot* – and the ball struck her left temple, spinning her so quickly that one of her high heels broke and she fell forward, her face hitting the ground first because her hands never moved from her sides, which later gave rise to speculation[15] that she was dead before she touched the earth.

Whether she died *that* quickly, I don't know; but she was dead by the time Mr. Chickering reached her. He was the first one to her. He lifted her head, then turned her face to a slightly more comfortable position; someone said later that he closed her eyes before he let her head rest back on the ground. I remember that he pulled the skirt of her dress down. Then he stood up, removing his jacket, which he held in front

[15] when you guess about the possible causes or effects of something without knowing all the facts

of him. I was the first of the players to cross the line, but – for a fat man – Mr. Chickering was agile[16] (2). He caught me, and he threw the jacket over my head. I could see nothing.

"No, Johnny! No, Johnny!" Mr. Chickering said. "You don't want to see her, Johnny," he said.

Your memory is a monster; *you forget – it* doesn't. It simply files things away. It keeps things for you, or hides things from you – and summons[17] (3) them to your recall with a will of its own. You think you have a memory; but it has you!

Later, I would remember everything. In revisiting the scene of my mother's death, I can remember everyone who was in there that day; I remember who wasn't there, too – and what everyone said, and didn't say, to me.

SELF-STUDY

Site to explore:
http://www.exploratorium.edu/memory/

Explore the anatomy of memory

Questions to guide you:

1. Which part is responsible for the highest level of cognition?
2. Why is 'gray matter' gray?
3. What is the 'white matter' made up of?
4. How is a communication network in the brain formed?
5. What is hippocampus responsible for?
6. Which part of the brain deals with skill memory? What is skill memory?

[16] quick-moving
[17] to gather

Chapter 2
HOW TO IMPROVE YOUR MEMORY

WARM-UP

According to George Miller, a Harvard University professor, most people can remember between 5 and 9 items on a list, the average being 7. How many can ***you*** remember? You will hear 12 words read once only by your teacher. Put down as many as you can remember.

LISTENING

The SQ3R Method

Pre-listening

The following items contain some vocabulary from a segment of a lecture on the SQ3R method. Each of the vocabulary words is printed in **boldface**, in the context in which it occurs, together with three possible definitions. Use the context to help you choose the best definition for each word. Then check your guesses in a dictionary.

1. Before you even start to read, **survey** the chapter.

a. ask questions b. look through c. examine

2. Look quickly at the chapter **outline** (if any).

a. main points b. details c. figures

3. Reading is greatly **enhanced** if you are searching for the answers to the questions.

a. satisfied b. developed c. improved

4. When you find the material which answers these questions, put a mark (x) on the **margin** next to that material.

a. an additional amount b. the empty space at the side of the page c. the difference in the number of votes

5. Once you finish reading a section, close the book, and **recite** from memory the answers to your questions.

a. speak b. recall c. say something that you have learned

6. Relate the material to other ideas, to experiences in your life, or to **familiar** things.

a. well-known b. not very well -known c. accessible

While-listening

A. You are now going to listen to this segment of a lecture. First read the questions below. Answer as many as you can from your first listening.

1. What is this method used for?
2. What do the letters SQRRR stand for?
3. Which is one of the oldest classroom techniques in the world? What famous person used it?
4. Why is this technique so important?
5. How much are people able to remember when they use this technique?
6. When should you review the chapter again?

B. Now listen to the lecture again. Try to listen to the specific information that you need to summarize the main idea of each step of this method.

S
Q
R
R
R

- **Share notes with a partner**

Post-listening

- **Which of the techniques described in the lecture do you use?**

READING

Boost Your Memory
By Patricia Hitner

Pre-reading

- **Have you got any stories of forgetfulness, either your own or somebody else's?**

While-reading

A. Read the text and match the following headings with the numbered sections of the text below. There is one extra.

a. Play the name game
b. Use mnemonic memory aids
c. Develop routines
d. Pay attention
e. Recall by category
f. Make lists
g. Learn

1. A bit of forgetfulness is normal at any age. But by the time you reach your middle years, you've spent several decades remembering all kinds of *trivia*[18]. Your mind now holds a wealth of details, so it may take a little longer to recollect a name or date.

Dr. Louis Caplan, M.D., neurologist-in-chief at Boston's New England Medical Center, *likens*[19] the brain to a filing system. "I think the older you get, the larger the *filing cabinet*[20], and the harder it is to retrieve information."

"People who complain about their forgetfulness generally don't have a serious neurological problem," says he.

So don't *fret*[21] if your mind *draws a blank*[22] from time to time. Instead, work on improving your memory with the following advice.

Remembering is an active process that requires a certain amount of concentration. Forcing yourself to pay attention is crucial to *retaining*[23] facts, says Stanley Berent, Ph.D., a neuropsychologist at the University of Michigan Medical Center.

Boredom is probably the main cause of distraction. Anxiety, *fatigue*[24], pain, illness, and depression are other reasons people don't pay attention. You can *gauge*[25] your interest level by your body language. Are you looking around the room or staring at the clock? Asking the speaker a question makes you focus on the message.

2. You've just met someone for the first time and you've *struck up*[26] a lively conversation. The only trouble is, you can't remember this person's name. To avoid

[18] unimportant things
[19] to compare
[20] a cupboard with drawers
[21] to worry
[22] to get no result
[23] to keep in one's memory
[24] tiredness
[25] to measure, to estimate
[26] to start

this embarrassment, Dr. Berent suggests saying a new acquaintance's name out loud three times.

When you're introduced, make a point of repeating the name once. Then, work the name into the conversation again by saying, "Well, John, glad to meet you." Lastly, think of a way to use the person's name in another sentence, such as, "John, where do you live?"

3. You can devise a variety of *gimmicks*[27] to help you remember people, places, dates, names, and things. These *mnemonic*[28] devices can be either verbal or visual. For example, if you have a list of things to recall, take the first letter of each word and form a new word. If you need to buy milk, eggs, sugar, and salad, simply think of the word "mess".

Using a more visual mnemonic device, Dr. Berent pictures the inside of his home during lectures. He "places" topics he wants to cover in different rooms. Then, he "moves" from room to room, discussing each topic along the way.

4. Even people with good memory need written reminders now and then. "Nothing can substitute for a written list," says Dr. Berent. List-making serves two purposes. A list is a reminder that you can refer to repeatedly. And the act of writing helps *log*[29] the data in your brain. "To do" lists are helpful when you have a lot of tasks to accomplish.

5. You have a better chance of remembering something if you can concentrate solely on that topic and close your mind to all other things. This ability to focus tightly is *a knack*[30] that can be practiced and improved.

If you constantly forget where you put things, find a permanent home for each of them. Or, if you worry about missing important meetings, *invest* in a date book. You don't have to *clutter*[31] your mind with things that are routine, insists Dr. Caplan. "You just have to remember the routine."

6. Our mental filing system probably stores facts by categories, explains Dr. Caplan. Therefore, breaking into a particular "file" helps you retrieve long-forgotten details. For example, if you need to remember the name of your third-grade teacher, picture yourself when you were eight or nine. Think about the person you sat next to in class, what lessons you learned, and what you wore to school. *Eventually*[32]*, that elusive*[33] name should come to you.

---

[27] a trick, a device
[28] aiding the memory
[29] to enter
[30] the ability to do something skillfully
[31] to fill
[32] at last
[33] escaping

B. Practice the SQ3R method working on the text above. Use the following chart.

Survey: *Record important titles and subtitles from work.*

_____

_____

_____

_____

Question: *Write «Who, What, When, Where, and Why» questions from main topics.*

_____

_____

_____

_____

_____

_____

Read: *Write answers to questions from above.*

_____

_____

_____

_____

_____

_____

Recite: *Record key facts and phrases as needed for each question.*

_____

_____

_____

_____

Review: *Create a summary paragraph for each question.*

_____

_____

_____

_____

_____

Powered by TeAch-nology.com- The Web Portal For Educators! (www.teach-nology.com)

DISCUSSION

(in small groups)

- Does your lifestyle mean that you have to remember a lot each day?
- In what way do you think modern society is busier and more stressful than a hundred years ago?
- In what ways do you help yourself remember all that you have to do each day?

ROLE-PLAY

- (in pairs) **Role-play a psychologist who gives advice to a student or a retired client who has memory problems.**

SELF-STUDY

- Explore this site http://www.exploratorium.edu/memory/

Questions to guide you:

1. What lifestyles and techniques are used for exercising the minds of elderly people?
2. What makes Lily Hearst remarkable?
3. What does ALL stand for? Who are involved in it? What kind of people are they? What do they do?

4. Why should you wear a wig if you want to rob a bank?
5. Why are the paintings by the memory artist not as accurate as the respective photographs?
6. False memories – why are they false?

GROUP PROJECT

- Produce and present a leaflet of tips on how to improve memory.
- Prepare a brochure *"It's interesting to know facts"*. Explain your choice when presenting the brochure.
- Prepare a presentation *Cultural Influences on Memory*.

SCIENCE IN THE NEWS

Read the article and say

1. Who published some strategies and techniques used by actors when memorizing a new text;

2. What advice they give to improve one's memory;

3. What the traditional division of memory is and why it is not good enough;

4. Which techniques they mention you use or would like to try.

В последнем номере (issue) журнала Psychological Science когнитивный психолог Хельга Нойс и ее муж, актер Тони Нойс опубликовали стратегии и техники, использующиеся многими актерами при запоминании нового текста. Авторы работы решили предложить несколько способов улучшения памяти тем из нас, кто постоянно что-то забывает.

Еще в 1972 году ученые Robert Lockhart и Fergus Craik посчитали, что это традиционное деление памяти на сенсорную, кратковременную и долговременную не позволяет понять, каким образом мы запоминаем куски информации выборочно. Они заключили, что эффективность запоминания зависит от смыслового содержания информационного блока – будь то смысловая зрительная память или смысловая слуховая память. И действительно, Вы можете потратить часы, пытаясь «зазубрить» информацию, но, если Вы не проникнете в суть, не поймете смысла текста, Вы его так и не запомните.

«Полное эмоциональное, физическое и интеллектуальное погружение в текст – часть профессии актера», – пишут супруги Нойс. Однако такой подход может пригодиться не только актерам, но и большинству людей других профессий.

Вот некоторые способы, которые помогают улучшить память:

Обсуждение информации с воображаемым слушателем. В исследовании, проведенном супругами Нойс, студентам предлагали прочесть некий материал и вообразить человека, которому могла бы понадобиться данная информация. Когда студенты фокусировались на значении текста и способах объяснения этого значения их воображаемому слушателю, процесс запоминания пошел быстрее.

Участие в курсах актерского мастерства (acting technique course). В этом же исследовании супруги Нойс показали, что у людей, посещающих курсы актерского мастерства, способность запоминать большие текстовые блоки улучшается. (http://www.effecton.ru/479.html)

Unit 6
STATES OF CONSCIOUSNESS

Chapter 1
NATURAL VARIATIONS IN CONSCIOUSNESS

WARM-UP

What is the difference between *dreaming* and *daydreaming?* Does everyone dream and, if so, how often?

Imagine you are not in the classroom now. Where are you in your fantasies? What are you doing? What can you see? Share your fantasies with your fellow students.
Does daydreaming serve any useful purpose?

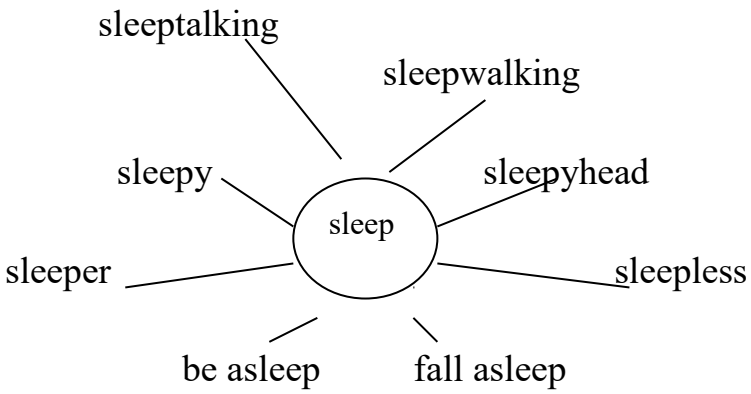
THINK ABOUT IT!

1. What do we mean by consciousness, and why is it of interest to psychologists?
2. Do people have "biological clocks"?
3. Is going without sleep harmful?
4. Can hypnosis really change behaviour?
5. How do alcohol and drugs affect our behaviour?

READING
Natural Variations of Consciousness

Pre-reading

1. **Write down three important factors related to the topic. Discuss your ideas with the rest of the group.**
2. **Pair – work. Write down 10 words you think are associated with the topic. Share your lists with the other fellow-students.**
3. **The following diagram shows some words and phrases with sleep. Study the diagram and answer the questions below.**



- Why do some people sleepwalk and sleeptalk?
- What do we call a person who likes to sleep?
- A person who sleeps is a ----------.
- You come home after a hard working day, you go straight to bed and immediately---------- ----------.
- You haven't slept well lately, and often spend---------- nights. As a result, you feel ---------- during the day.
- Less energy is used when we ---------- ---------- than we're awake.

While-reading

Read the text below and say if these statements are True or False according to the text?

1. Psychologists divide consciousness into two areas: waking consciousness and altered states of consciousness (ASC).
2. ASC include sensation, perception, thinking and other factors.
3. Daydreaming is thought to be useless.
4. Some psychologists think that daydreaming develops creativity and cognitive skills.
5. *Circadian* is a Latin word meaning "about a night."
6. Researchers began to study the functions of sleep and its value long ago.
7. We notice circadian rhythms if they are broken.
8. Workers frequently have health problems if they change shifts.

Making decisions, remembering, daydreaming, concentrating, reflecting, sleeping, and dreaming are but a few mental processes we commonly experience. Our awareness of these various mental processes is called **consciousness.** Psychologists generally divide consciousness into two broad areas. Waking consciousness – or

conscious awareness – includes all the thoughts, feelings, and perceptions that occur when we are awake and alert. Such waking consciousness includes sensation and perception, learning, memory, thinking, problem solving, decision making, intelligence, and creativity – all processes pivotal in contemporary psychology.

But there are times when we experience **altered states of consciousness (ASC**). Some altered states (such as daydreaming, sleep, and dreaming) occur routinely, even spontaneously. Other ASCs (such as hypnosis, meditation, and intoxication) are brought on by deliberate attempts to alter normal consciousness. We will begin by examining ***natural variations in consciousness.***

Daydreaming is an ASC that occurs without effort. For example, while sitting in a class, you may suddenly find yourself thinking about things that have nothing to do with the subject of the lecture. Does daydreaming serve any useful purpose? Some psychologists regard daydreaming as nothing more than a retreat from the real world, especially when that world is not meeting our needs.

Other psychologists stress the positive value of daydreaming and fantasy. According to Freudian theories, daydreams allow us to express and deal with desires – generally relating to sex or hostility – that would otherwise make us feel guilty and anxious. And some speculate that daydreaming builds cognitive skills and creativity. Daydreaming helps people endure difficult situations as well: Prisoners of war have used it to survive torture and deprivation. Daydreaming and fantasy, then, may provide relief from everyday reality and reduce internal tension and external aggression.

Sleep and Dreaming. We spent about one-third of our lives in the altered state of consciousness known as sleep. Throughout history, cultures have paid varying degrees of respect to sleep and dreams. In some societies people believe that universal truths are revealed in dreams; members of other societies view sleep as a nonproductive, though essential, activity. Only recently, have sleep researchers started to analyze the complexity of sleep, its functions, and its psychological and biological value.

Circadian Cycles: The Biological Clock. Like many other biological functions, sleep and waking follow a daily, or *circadian*, cycle (from the Latin expression *circa diem*, meaning “about a day”. The time we spend asleep and awake follows a 24-hour cycle influenced by the sun. Sleep-wake cycles change as the days grow longer or shorter with the seasons. Metabolism, stomach acidity, alertness, body temperature, blood

pressure, and the level of most hormones also vary over the course of a day. Together, these rhythms are often referred to as our *biological clock.* Not all body cycles follow the same pattern. For example, the level of the hormone epinephrine (which causes the body to go on alert) reaches a peak in the late morning hours and then steadily declines until midnight , when it suddenly drops to a very low level and remains there until morning. By contrast, levels of melatonin (involved in the onset of sleep) surge at night and drop off during the day.

Normally, the rhythms and chemistry of all these different cycles interact smoothly, so that a shift in one brings about a corresponding shift in others. In fact, we rarely notice these circadian rhythms until they are disturbed. Jet lag is a familiar example. Shift work serves as another example: Workers who are tranferred from the day shift to the midnight shift often experience weight loss and suffer from irritability, health problems, insomnia, and drowsiness for a very long time.

VOCABULARY FOCUS

A. Look in the text and find the word or phrase that means:

1. knowledge or realization
2. watchful, observant
3. central, main
4. to make or become different, to change in character, position, etc
5. to form opinions without having definite knowledge
6. to tolerate
7. a beginning
8. to increase in volume or intensity
9. physical effects of tiredness etc. felt after a flight across time zones
10. a set of workers who start work as another set finishes, the time for which they work

B. Word-building

Complete the table

Adjective	Noun
1. conscious	----------
2. alert	----------
3. aware	----------

4. creative ----------
5. altered ----------
6. hostile ----------
7. complex ----------
8. active ----------
9. cognitive ----------
10. real ----------

C. Fill the gaps using one of these key words from the text:

awake daydream (v) consciousness circadian
sleep (v) tension pressure level

1. Typically, we _____ when we would rather be somewhere else or be doing something else.
2. Even when we are fully _____and alert, we are usually conscious of only a small portion of what is going on around us.
3. Results like these suggest that a melatonin pill may help people adjust their _____ rhythms at will.
4. Dolphins, which are required to come to the surface to breathe, _____with only one hemisphere of their brain at a time.
5. We are rarely attuned to such bodily processes as blood _____and respiration.
6. When the cats were finally permitted to sleep, the adenosine _____dropped.
7. Daydreams and dreams are the most common alterations of normal_____, and both occur naturally under normal conditions.
8. Daydreaming and fantasy may reduce internal_____.

GRAMMAR FOCUS 1
Parts of Speech

For questions 1-14, read the text below. Use the words in the box to the right of the text to form one word which fits in the same numbered space in the text. The exercise begins with an example (0).

SLEEP DISORDERS

The (**0**) scientific study of typical sleep patterns has yielded insights into sleep disorders such as insomnia. Most episodes of insomnia grow out of (**1**) _____ events and are temporary. But for some (**2**) _____, insomnia is a persistent (3) _____.

Halcion, one of the most **(4)**_____ prescribed remedies for insomnia, frequently causes anxiety, memory loss, and **(5)**_____ behavior.

Another sleep disorder, apnea, is associated with **(6)**_____ difficulties at night: In severe cases, the victim **(7)**_____ stops breathing after **(8)**_____ asleep.

Narcolepsy is a **(9)** _____ disorder whose victims nod off without warning in the middle of a conversation or other alert activity. People with narcolepsy often experience a sudden **(10)** _____ of muscle tone upon **(11)** _____of any sort of emotion. A joke, anger, sexual stimulation – all bring on a feeling of **(12)** _____. Another symptom of the disorder is immediate **(13)** _____ into REM sleep, which produces **(14)** _____ hallucinations.

0 science
1 stress
2 suffer
3 disrupt
4 wide
5 violence
6 breathe
7 actual
8 fall
9 inherit
10 lose
11 express
12 weak
13 enter
14 frighten.

GRAMMAR FOCUS 2
Participles

Complete these sentences with the verbs in brackets. You have to use participle clauses (-ing and -ed clauses). The first sentence has been done for you.

1. Some people claim they never sleep, but when *observed* (observe) under laboratory conditions, they actually sleep soundly without being aware of it; others engage in short periods of "microsleep," *dozing* (doze) for a second or two at a time.
2. ---------- (work) from an evolutionary perspective, some psychologists see sleep as an adaptive mechanism that evolved to encourage organisms to remain active and conserve energy.
3. This figure illustrates the electrical activity ---------- (relate) to the brain, heart, and facial muscles at each stage.
4. As---------- (measure) by an EEG (electroencephalogram), brain waves during the "twilight" state are characterized by irregular, low-voltage alpha waves.
5. This brain-wave pattern mirrors the sense of relaxed wakefulness that we experience while ---------- (lie)on a beach or hammock or when resting after a big meal.
6. Sometimes they experience a ---------- (float) or ---------- (fall) sensation, ---------- (follow) by a quick jolt back to consciousness.
7. Stage 1 of the sleep cycle is marked by a slowing of the pulse, muscle relaxation, and side-to-side ---------- (roll) movements of the eyes – the last -------- (be) the most reliable indication of this stage of sleep.
8. Stage 1 brain waves are "tight" and of very low amplitude, ---------- (resemble) those ---------- (record) when a person is alert or excited.

JIGSAW READING AND SPEAKING

Student A should read the text "Sleep". Student B should read the text "Dreams". After studying your text, get together with your fellow students who have read the same text. Present the text in the form of a diagram or graph, or produce a poster on the information from the text. Using these, teach the students from the other group what you have learned from your text.

SLEEP

Nobody who has tried to stay awake longer than 20 hours at a time could doubt the necessity of sleep. Although still uncertain about the function of sleep, scientists have learned a great deal about the rhythms of sleep. Data from studies of sleep show that although there are significant individual differences in sleep behaviour, almost everyone goes through several stages of sleep. Each stage is marked by characteristic patterns of brain waves, muscular activity, blood pressure, and body temperature.

"Going to sleep" means losing awareness and failing to respond to a stimulus that would produce a response in the waking state. Brain waves during this "twilight" state are characterized by irregular, low-voltage alpha waves. In this twilight state with the eyes closed, people often report seeing flashing lights and colors, geometric patterns, and visions of landscapes. Sometimes they also experience a floating or falling sensation, followed by a quick jolt back to consciousness.

After this initial phase, the sleeper enters Stage 1 of sleep. Stage 1 brain waves are "tight" and of very low amplitude, resembling those recorded when a person is alert or excited. But, in contrast to normal waking consciousness, Stage1 of the sleep cycle is marked by a slowing of the pulse, muscle relaxation, and side-to-side rolling movements of the eyes.

Stages 2 and 3 are characterized by deeper sleep. Brain waves increase in amplitude and become slower. At these stages, the sleeper is hard to awakened does not respond to stimuli such as noises or lights. Heart rate, blood pressure, and temperature continue to drop.

In stage 4 sleep, the brain emits very slow *delta waves.* Heart rate, breathing rate, blood pressure and body temperature are as low as they will get during the night.

About an hour after falling asleep, the sleeper begins to ascend from Stage 4 to Stage3, Stage 2, and back to Stage 1 – a process that takes about 40 minutes. The muscles are more relaxed than at any other point in the sleep cycle, and the person is very difficult to awaken. The eyes move rapidly under closed eyelids. This **rapid eye movement (REM) sleep** stage is distinguished from all other stages of sleep (called **non-REM** or **NREM**). The person in this stage appears to be deeply asleep and is incapable of moving. This is also the stage when most vivid dreaming occurs. The first Stage 1-REM period lasts about 10 minutes and is followed by Stages 2,3, 4 of NREM sleep. This sequence of sleep stages repeats itself all night, averaging 90 minutes from Stage 1-REM to stage 4 and back again. Normally, a night's sleep consists of 4 to 5 cycles of this sort.

DREAMS

We typically have four or five dreams a night, accounting for about 1-2 hours of our total time spent sleeping. Dreams are vivid visual and auditory experiences that our minds create primarily during REM periods (you can read the information about REM in the last paragraph of the text “Sleep”).

Psychologists have long been fascinated by dream activity and the contents of dreams. Sigmund Freud (1900) called dreams the “royal road to th unconscious.” Believing that dreams represent wishes that have not been fulfilled in reality, he asserted that people’s dreams reflect the motives guiding their behaviour – motives of which they may not be consciously aware. Freud distinguished the surface content of dreams from their latent content – the hidden, unconscious thoughts or desires that he believed were expressed indirectly through dreams.

Neurophysiologists offer different explanations for the illogical nature of so many dreams. Whatever the ultimate explanation for dream content, we do know that it is related to several factors. For example, when you are close to waking, your dreams are apt to centre on recent events. In the middle of the night, however, dreams generally focus on childhood or past events. Most dreams last as long as the events would in real life. Generally, dreams consist of a sequential story or series of stories.

Do we need to dream? In Freud’s view, dreams serve as a psychic safety valve. What is, they allow us to give harmless expression to disturbing thoughts. If this theory is correct, depriving people of the opportunity to dream should have significant effects on their waking lives. To some extent, research has proved Freud right. Experiments have shown that people deprived of REM sleep become anxious, irritable, and hungry, have difficulty concentrating, and even hallucinate in their waking hours.

Dreams typically reflect the personality, interests, concerns, and emotional experiences of the dreamer.

Sleeptalking and Sleepwalking We often associate sleeptalking and sleepwalking with dreaming, but actually only 20 percent of sleeptalking and sleepwalking occur during REM sleep. In fact, most episodes of sleeptalking and sleepwalking take place during delta sleep (Stage 4). Both sleeptalking and sleepwalking are more common among children than adults. Boys are more likely walk in their sleep than girls.

Night terrors, or sleep terrors, is a disorder affecting 1 to 6 percent of children between 4 and 12 years old. A child experiencing a night terror suddenly sits up in bed, screaming. Sleep terrors are different from *nightmares.* Children generally cannot be awakened from night terrors and will push away anyone trying to

comfort them. Unlike nightmares, too, sleep terrors are not remembered in the morning. They occur more often if the child is very tired. Adults who have them are likely to suffer from a personality disorder or to abuse drugs or alcohol. Brain injuries may also contribute to night terrors in adults.
Neither nightmares nor night terrors alone are evidence of psychological problems. Anxious people have no more nightmares than other people do. And like night terrors, nightmares become less frequent with age.

Chapter 2

ARTIFICIAL ALTERATIONS IN CONSCIOUSNESS

WARM-UP

In 1967 John Lennon and Paul McCartney wrote the song *Lucy in the Sky with Diamonds.* People associate it with drug use. Look at the title of the song carefully and say why?

Find more information about the history of the song at:

http://en.wikipedia.org/wiki/Lucy_in_the_Sky_with_Diamonds

THINK ABOUT IT!

1. Can hypnosis change behaviour?
2. How do alcohol and drugs affect our behaviour?

READING 1

Read the text and answer questions (1-5).

1. What are the functions of the sympathetic nervous system?
2. When was hypnosis first used?
3. What other term was once used to describe hypnosis and why?
4. Who was Hypnos?
5. Can people change or get rid of bad habits through hypnosis? What do psychologists think about it?

MEDITATION
For centuries, people have used various forms of meditation to experience an alteration in consciousness. Meditation suppresses the activity of the sympathetic

nervous system, the part of the nervous system that prepares the body for energetic activity during an emergency. Meditation also lowers the rate of metabolism and reduces heart and respiratory rates. Alpha brain waves (which accompany relaxed wakefulness) increase during meditation, and there is a decrease in blood lactate, a chemical linked to stress.

Meditation has been used to treat certain medical problems, including drug abuse. Some studies have found that a high percentage of people who used drugs stopped using them after taking up meditation.

Besides physiological benefits, people who regularly practice some form of meditation may gain emotional and even spiritual advantages: They often report increased sensory awareness, a sense of timelessness, well-being, and total relaxation.

HYPNOSIS

Hypnosis has a history dating back to mid-eighteenth-century Europe, where Anton Mesmer, a Viennese physician, fascinated audiences by putting patients into trances to cure their illnesses. The term mesmerism was first used to describe the phenomenon, though *hypnosis* has become the preferred term (Hypnos was the Greek god of sleep).

Hypnosis is a trancelike state in which the person responds readily to suggestions. People's susceptibility to hypnosis depends on how suggestible they are. It varies from one person to another. Therefore, its clinical and therapeutic value is difficult to assess. Nevertheless, hypnosis has several practical applications; for instance, it eases the pain of certain medical conditions and can help people stop smoking and break other habits.

Can hypnosis make someone change or eliminate habits? Psychologists have not reached agreement on this issue. Critics point out that if people really want to change a behavior, they are likely to do so without hypnosis. Hypnosis can support their will, but so might joining a support group. In other words, posthypnotic suggestions may be no more effective than other kinds of supportive help.

Transfer the information from the text into the chart.

Artificial alterations in consciousness	How it affects body and mind	Reasons for using it
Meditation		
Hypnosis		

READING 2

A. Read the following passage and study the differences between substance use, abuse and dependence. Then do the exercise following the text.

SUBSTANCE USE, ABUSE AND DEPENDENCE

Is it important to distinguish between substance use and substance abuse. *Substance use* may be essential for medical reasons and it may also be culturally approved and valued. By contrast, ***substance abuse*** is a pattern of use that diminishes the person's ability to fulfill responsibilities at home or at work or school, that results in repeated use of a drug in dangerous situations, or that leads to legal difficulties related to drug use.

Continued abuse over time can lead to ***substance dependence*****,** a pattern of compulsive drug taking that is much more serious than substance abuse. It is often marked by ***tolerance***, the need to take higher doses of a drug to produce its original effects or to prevent withdrawal symptoms. ***Withdrawal symptoms*** are the unpleasant physical or psychological effects that follow discontinuance of the psychoactive substance.

To study the effects of drugs scientifically, most researchers use the *double-blind procedure* to eliminate biases that might arise out of the experimenter's or the participant's prior knowledge or expectations about a drug.

Consciousness-altering drugs are grouped into three broad categories: depressants, stimulants, and hallucinogens.

B. Match the terms on the right with their explanations on the left.

1. drug taking that is difficult to resist.
2. using larger quantities of a drug becomes a necessity.
3. it reduces people's abilities to perform tasks.
4. it may be important for treating people.
5. painful reactions that people have when they stop taking drugs

a. substance use
b. substance abuse
c. substance dependence
d. tolerance
e. withdrawal symptoms

LISTENING 1

You will hear a fragment of the lecture on consciousness-altering drugs. Check the meaning of the words in the box in your dictionary or with your teacher. Then listen and complete the gaps in the table below. Some gaps have been filled for you.

To slow down, to calm down, to inhibit, to dull, to induce, boundless, benign, a rush, addictive cravings, delusions, potent, profound

Categories of Drugs	**Examples of Drugs**	**Effects on Users**
	Alcohol	
		Stimulate the sympathetic nervous system; produce feelings of optimism and energy.
Hallucinogens		

LISTENING 2

Listen again and answer the questions.

1. What are the consequences of alcohol use and abuse?
2. What are barbiturates used for?
3. What products contain caffeine?
4. Complete the sentence: The crystalline form of cocaine is called_____.
5. Another name for PCP is _____ _____.
6. Where do hallucinogens occur naturally?
7. What drug is produced in the laboratory?
8. What are the most popular drugs among students?

Post-listening

- Do you know any stories about people who abuse drugs?
- What is the situation with drugs in your home town?
- What is being done in your home town (in your country) to reduce drug taking?

CHECK BACK

1. We experience ---------- consciousness when our mental state differs from the state we experience when we are awake and alert.
2. According to Freud, the real driving forces behind human actions are ---------- --- ------ ---------- instincts that are hidden but brought into consciousness through dreaming and hypnosis.
3. Match the sleep disorder with the symptoms:
   ------- insomnia a. Unpredictable sleeping sessions
   ------- apnea b. Breathing difficulties and day-after exhaustion
   ------- narcolepsy c. Acute or chronic inability to sleep
4. Many psychologists believe that the effects of hypnosis can be accounted for by the variable of----------.
5. Although alcohol is a ----------, it is sometimes experienced subjectively as a ----------.
6. ---------- are commonly known as “downers.”
7. The crystalline form of cocaine is called:
   a. LSD
   b. angel dust
   c. crack
   d. opium

WRITING

Write an essay on one of these topics or any other you may suggest.

1. Do you believe that dreams offer insights into our innermost thoughts and feelings? Should psychologists study dreams or discuss the content of dreams with their patients? Why or why not?
2. What, in your opinion, are the major causes of substance abuse and dependence? How should society deal with these problems?
3. To what extent does culture affect the ways in which people use various drugs and their reactions to those drugs?

SCIENCE IN THE NEWS

Read the text to find some interesting facts about hypnosis. How do you understand the title of the passage (Primitive hypnosis)?

Первородный гипноз

Желание жить представляет собой, пожалуй, самое фундаментальное проявление подсознательного. По своему характеру оно действительно похоже на постгипнотическое внушение, не поддающееся никаким посторонним влияниям. И надо полагать, такой перманентный самогипноз необходим человеку в состоянии бодрствования для того, чтобы поддерживать и умножать свои силы и находить разумные аргументы, которые способствовали бы его выживанию в мире, где превосходство добра над злом далеко не очевидно.

Близко к этой фундаментальной психической программе стоит и способность человека исполнять те или иные роли не только на театральных подмостках, но и в обыденной жизни, а также во время различных игр. Именно игры формируют у личности поведенческий и эмоциональный опыт (как, скажем, игры типа «дочки – матери»). Главным моментом любой игры служит вхождение в заданный образ, что может представлять собой лишь результат самовнушения с участием гипнотических механизмов, непроизвольно настраивающих организм на заданный вид деятельности.

В этом смысле все. бытовые, спортивные, деловые и даже военные игры представляют собой деятельность в состоянии более или менее глубокого транса.

Read the passage and say how love is connected with hypnosis. Do you agree with Freud's point of view?

Любовь зла...

Влюбленность как острое эмоциональное переживание, как неудержимое стремление к объекту сексуального выбора способствует реализации программы сохранения вида. При этом часто любовь возникает по механизму гипнотического запечатления, так называемого импринтинга.

Психическое напряжение, вызываемое состоянием влюбленности, может быть движущей силой многих действий (творческой активности, интереса к людям и пр.) даже в тех случаях, когда она не связана с удовлетворением сексуальных

потребностей, и потому считается благотворным и благородным переживанием.

Характеризуя важнейшие черты влюбленности, З.Фрейд обращал внимание на то обстоятельство, что объект любви в известной мере освобождается от критики, что все его качества оцениваются выше, чем аналогичные качества нелюбимых лиц, и все, что делает объект любви и что он требует, – абсолютно правильно и безупречно. Именно это и позволяет утверждать: в основе формирования влюбленности лежат механизмы гипноза.

(Леонид Гримак)

http://tmru.bizland.com/200002/p23.html)

Unit 7
COGNITION AND LANGUAGE

Chapter 1
CONITIVE PROCESSES

WARM-UP: Visualizing (creating mental pictures)

- Your teacher is going to ask you to close your eyes and visualize some things.
- After you have opened your eyes answer the following questions:
- What do we create in the process of visualization?
- What kinds of images do you know?

THINK ABOUT IT!

- What is the relationship between language and thinking?
- What is an effective way to solve problems?
- Can you solve the riddle below?

"A man married 20 different women in the same small town. All of these women are still alive, and he never divorced a single one of them. How did this happen?"

READING

Pre-reading

1. Match the words in column A with their explanations in column B.

A	B
1. riddle	a. drawing or painting
2. extremely	b. to move in the opposite direction
3. reverse	c. less important
4. sensory	d. greatly
5. sketch	e. something puzzling
6. subordinate	f. receiving or transmitting sensations

2. Check the meaning of the words in the box in your dictionary or with your teacher.

clergyman	to groan	whereby
to acquire	flexible	to assign
to govern	subordinate	

While – reading

1. **Read the text and answer the questions after each passage.**

THE BUILDING BLOCKS OF THOUGHT

The solution to the riddle is that the man was a clergyman. When you hear the answer for the first time, you are likely to groan because the solution is so obvious. In this unit we will consider those processes that enable us to solve little problems, such as riddles, as well as bigger, more important problems.

Psychologists use the term **cognition** to refer to all the processes whereby we acquire and use information. It is crucial to intelligence, coping and adjustment, abnormal behaviour, and interpersonal relations. Cognitive processes that illustrate types of thinking include language, imagery, conceptualization, evaluation or interpretation, problem solving, and decision making.

Language, images, and concepts are the three most important building blocks of thought – the tools we think with – and the ways in which we use these building blocks to solve problems and make decisions.

- **What is cognition and why is it important?**
- **What are the most significant tools of thinking?**

LANGUAGE

Human language is a flexible system of symbols that enables us to communicate our ideas, thoughts, and feelings. Spoken language is based on universal sound units called **phonemes.** The sounds of *t, th,* and *k,* for instance, are phonemes. There are 45 phonemes in English. By themselves, phonemes are meaningless but they can be grouped together to form words, prefexes (*un-, pre-),* and suffixes (*-ed,. –ing).*These are called **morphemes**, which are the smallest meaningful units in a language. Morphemes play an extremely important role in human cognition. They can represent ideas such as “red” or “calm” or “hot.” The suffix *–ed* signifies “in the past” (as in *walked*). The prefix *pre-* reflects the idea of “before” (as in *prehuman*).

- **What units play a great role in human cognition? What do they represent?**

We can combine morphemes to make up complex words that represent complex ideas, such as *un- character- istic, psycho-logy.* Words can be combined to form phrases and sentences, which can represent even more complex thoughts. When you wish to communicate an idea, you start with a thought, then choose words and phrases that will express the idea, and finally produce the speech sounds that make up those words and phrases. This is sometimes called *top-down processing.* When you want to understand a sentence, you must start with speech sounds and work your way up to the meaning of those sounds. This is called *bottom-up processing.*

- **What do you do when you want to communicate an idea?**

There are also rules for structuring sentences and their meanings. These rules are what linguists call a **grammar.** The two major components of a grammar are semantics and syntax. **Semantics** describes how we assign meaning to the morphemes we use. Semantic rules explain how different combinations of morphemes affect meaning, such as adding the suffix *–ed* to *play* to put the action in the past, or adding the prefix *un-* to *necessary* to reverse its meaning. **Syntax** is the system of rules that governs how we combine words to form meaningful grammatical sentences. In English, for example, a rule specifies that adjectives come before nouns.

- **What is a grammar?**
- **What are semantic rules for?**
- **What is syntax responsible for?**

IMAGES

An **image** is a mental representation of a sensory experience; it can be used to think about things. We can visualize people we know; we can smell Christmas dinner; we can hear our president talking about democracy. In short, we can think by using sensory images.

Images allow us to think about things in nonverbal ways. We all use imagery to think about and solve problems. We've all seen a teacher clarify a difficult idea by drawing a simple sketch on a blackboard. A graphic image can help to resolve the confusion. Images allow us to use concrete forms to represent complex and abstract ideas. Thus, images are an important part of thinking and cognition.

- **Can we think using images?**
- **What is the role of images?**

CONCEPTS

Concepts are mental categories for classifying specific people, things, or events. When you think about something, say, a leopard, you usually think of the concepts, such as *fast, spotted,* and *cat.* Similarly, concepts can also be used to create and organize hierarchies or groups of subordinate categories. For example, the general concept of *plants* can be broken down into the subordinate categories of *trees, bushes, and grasses,* the subordinate concept of *trees* can be further subdivided into *oaks, maples, pines,* and so forth. Without the ability to form concepts, we would need a different name for every individual object. Thus, concepts help us think more effectively about things and how they relate to one another.

- **What are concepts used for?**
- **Why do people need concepts?**

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

1. Cognitive processes include
   A. coping
   B. building blocks of thought
   C. problem solving

2. Phonemes form
   A. phrases
   B. prefixes
   C. sentences

3. To understand a sentence you need to use
   A. bottom-up processing
   B. top-down processing
   C. no processing

4. The system of rules used to form grammatical sentences is called
   A. grammar
   B. syntax
   C. semantics

5. Thanks to images we can think
   A. creatively
   B. without speaking
   C. in different ways

6. Concepts are categories which are related to
   A. spirituality
   B. individuality
   C. mentality

Post-reading

A. Add the following morphemes to the base forms of the words to make up as many complex words as possible.

-un; -re; -ly; -ment; -ful; -ed; -less; -able.

fashion
grammatical
employ
invite
health
sun
help

B. Combine the words below to form famous phrases.

- all, root, the, of, evil
- swallow, a, not, one, spring, does, make
- eat, tree, of, the, knowledge, to, of
- has, money, smell, no
- means, the, justifies, the, end

C. Use the ideas in B to practice top-down processing described in the text. With your partner(s) think of what these phrases mean. If you know something about their historical background, you can use this knowledge for communicating your ideas. If not, ask your teacher to help you. Think carefully of the words and phrases to express your ideas.

VOCABULARY FOCUS

Use prefixes and suffixes to form the negatives of these adjectives and nouns

1. normal _____
2. interpretation _____
3. meaning _____
4. flexible _____
5. important _____
6. speech _____
7. solvable _____
8. verbal _____

Phrasal verbs

1. Look at these examples of phrasal verbs from the text Problem Solving below. What do they mean?

- If your business is losing money, you might sit down to ***figure out*** how to cut costs.
- An algorithm guarantees a correct solution if the method suits the problem and if it is ***carried out*** properly.
- By defining the solution narrowly as cost cutting, you have ***ruled out*** the possibility that the best way might be to increase income rather than to cut costs.
- Sets enable us to ***draw on*** past experience to solve a present problem.
- People can judge when to change sets or when to ***give up*** a set entirely.

2. In the sentences below fill the gaps using the phrasal verbs from exercise 1.

1. His work _____ heavily ____learning theories of the 1980s.
2. I got back to bed and tried to _____ ____what had happened.
3. We need to _____ ____more research.
4. I _____ ____ trying to persuade him to continue with his studies.
5. The police have _____ _____ suicide.

GRAMMAR FOCUS 1

Passive structures

1 Rearrange the words below to make the beginnings of the sentences.

a. combined Words be can
b. been air raids, had the Hopi subjected to If
c. Thinking limited not to is
d. found When be some must information quickly,
e. often is method used This
f. You may to solve be a problem tempted as presented, it is
g. were The whether participants asked the letter appears *r*
h. also Concepts be can used

2 Match the beginnings of the sentences (a-h) with the endings of the sentences (1-8).

1. more frequently as the first or third letter in English words.
2. to form phrases and sentences.
3. but this impulse often leads to poor solutions.
4. when the goal has more information than the givens.
5. we select an *information retrieval* strategy.
6. they would probably have created a word to distinguish a butterfly from a bomber.
7. the words in one's language.
8. to create and organize hierarchies or groups of subordinate categories.

GRAMMAR FOCUS 2

Infinitive after *be likely*

Likely is an adjective with a similar meaning to *probable*.
Be + (un)likely is often followed by an infinitive (probable cannot be used in this way). E.g. I'm likely to be busy tomorrow.
In informal situations you can say *very/most likely. E.g. He is very/most likely to be late.*

Complete the sentences using the words given.

1. Children who live in the country's rural areas (very likely poor).
2. Young drivers (more likely have accidents) than older drivers.
3. We (more likely use) a compensatory model when the *stakes are high*[34].
4. (You likely ignore) the many cases of elderly people who are leading very productive lives.
5. Your stereotype of the elderly (likely remain) unchanged.
6. Some critics of the linguistics relativity hypothesis suggest that the need to think about things differently (more likely change) a language than the other way around.

[34] if the stakes are high when you are trying to do something, you risk losing a lot or it will be dangerous if you fail.

READING

LANGUAGE AND THOUGHT

A. Read the text and mark the statements (1-6) below as true or false.

1. Concept is a unit of thought.
2. The word order in sentences is determined by thought.
3. According to Whorf's theory, the language people speak determines the pattern of their behaviour.
4. Some critics of Whorf's theory believe that his hypothesis does not consider social experience.
5. Although language, culture, and thought are not the same, they are inseparable.
6. Not all languages can develop to reflect the growing complexity of life.

We have seen that language is closely tied to the expression and understanding of thoughts. Many words in our language – such as *friend, love, family, airplane* – correspond to concepts that are among the building blocks of thought. By combining words into sentences, we can link concepts to other concepts, forming complex thoughts and ideas. Because our language determines not only the words we use but also the way in which we combine those words into sentences, can language also determine how we think and what we can think about?

According to Whorf's **linguistic relativity hypothesis**, the language that a person speaks determines the pattern of that person's thinking and his or her view of the world. He noted, for example, that the Hopi, a Native American people, have only two nouns for everything that flies. One noun refers to birds; the other is used for everything else, whether airplanes, kites, or dragonflies. Thus, according to Whorf, the Hopi would interpret all flying things in terms of either of these two nouns – something in the air would be either a bird or a nonbird.

Think for a moment about how linguistic relativity might apply to what you are learning in this course. Such phrase as *linguistic relativity hypothesis* captures a very complex idea. To the extent that you understand this term, you probably find it easier to think about the relationship between language and thought, or between words and sentences and their meaning. The technical vocabulary of any field of study permits people to think and communicate more easily, and in more complex ways about the content of that field. In this way, language can help us organize our thoughts into concepts. But this example also illustrates some of the criticisms of Whorfs's hypothesis. For example, you were able to identify and think about basic speech sounds before you learned that they are called *phonemes.*

Some critics of the linguistics relativity hypothesis suggest that it is more likely that the need to think about things differently changes a language than that a

language changes how we think. For example, if the Hopi had been subjected to air raids, they would probably have created a word to distinguish a butterfly from a bomber. In fact, the more complex a society is, the more terms its language contains. As a society becomes more complex, its people create new words when they need them.

Language, culture, and thought are intertwined. People create words to capture important aspects of their experiences, and in turn, words may indeed shape how people think and what they think about. Experience shapes language, and language, in turn, affects subsequent experience. But people also can think about things for which they have no words, so thinking is not limited to the words in one's language.

B. Explain how the following words from the text above are linked.

1. love – concept – idea
2. Whorf – the Hopi – bird
3. complex society – terms – create

DISCUSSION

Discuss the following questions with your fellow students.

- Why do you think English has become a world language? Is it because it is easy to learn? Or is it for historical or economic reasons? What are these reasons?
- In some countries people are getting angry about the use of English words in their own language. For example, not everybody likes *marketing, public relations, promoter, presentation* in Russian. Does it matter? Can it be stopped?
- You are learning English at this moment. Is there any other language that you would really like to learn? Give your reasons.
- Why is it important to study language, including ancient languages?
- What would it be like if everyone in the world spoke the same language? Would it be better or easier? Would we lose anything?

The following phrases may help you to express your point of view.

GIVING OPINIONS
As I see it,…
I personally believe/think/feel that…

PRESENTING AN ARGUMENT

FOR: *It is a fact that… Bearing in mind that… It' worth noting/remembering that…*

AGAINST: *On the other hand,… Despite this,… But we shouldn't forget that…*

AGREEING	DISAGREEING
I agree entirely	*Well yes, but…*
Yes, I think so too.	*Yes, but don't you think that…?*

Chapter 2
PROBLEM SOLVING

WARM-UP

COLOR IDIOMS

English people often use expressions referring to colours, and you might find these rather difficult to interpret at first. In the lecture about creative problem solving you will hear the expression 'out of the blue.' What do you think it means? Below are some other colour idioms. What do they mean?

To feel blue, to look at the world through rose-coloured spectacles, the black sheep of the family, to be green, to see something in black and white.

READING

Read the text and say:

- what steps are necessary to take in solving a problem
- what factors affect successful problem-solving
- what factors are in the way to successful problem-solving
- what kind of people succeed in solving problems

PROBLEM SOLVING

1 In addition to thinking about things, human cognition involves the active use of language, images, and concepts – the building blocks of thought – to solve problems and make decisions.

The Interpretation of Problems

The first step in solving a problem is called *problem representation,* which means **5** interpreting or defining the problem. You may be tempted to try to solve a problem as it is presented, but this impulse often leads to poor solutions. For example, if your business is losing money, you might sit down to figure out how to cut costs. But by defining the solution narrowly as cost cutting, you have ruled out the possibility that the best way to stop losing money might be to figure out how to **10** increase income rather than to cut costs. A better representation of this problem would be to discover ways to cut costs or increase income or both.

Now consider this problem: You have four pieces of chain, each of which is made up of three links. All links are closed. It costs 2 cents to open a link and 3 cents to close a link. How can you join all 12 links together into a single, **15**continuous circle without paying more than 15 cents? In this problem most people assume that the best way is to open and close the end links on the various pieces of the chain. As long as they proceed with this "conceptual block," they will be unable to solve the problem. If the problem is represented differently, the solution is almost immediately obvious.

20 Quite often, people who seem to have a knack for solving problems are actually skilled at interpreting and representing them in effective ways.

Producing and Evaluating Solutions

Selection of an optimum strategy for solving a problem follows problem interpretation.

25 *Trial and error* is a problem-solving strategy based on the successive elimination of incorrect solutions until the correct one is found. But trial and error is time-consuming.

Information retrieval requires only the recovery of information from long-term memory, a strategy useful when a factual information must be found

30 quickly. *An algorithm* is a prescribed method of problem solving that guarantees a correct solution if the method suits the problem and if it is carried out properly.

Heuristics are rules of thumb that help to simplify and solve problems. They do not guarantee a correct solution, but they may bring it within reach. A very **35** simple heuristic method is *hill climbing***.** In this process, we try to move continually closer to the goal.

Another heuristic is the creation of *subgoals.* By setting subgoals, we can break a problem into smaller pieces, each of which is easier to solve than the problem as a whole. *Means-end analysis*, one of the most frequently used heuristics, combines **40** hill climbing and subgoals. It aims to reduce the discrepancy between the current

situation and the desired goal. It allows us to take digressions or temporary steps backward that may be essential to solving the problem. One potential danger with this approach is that if we stray too far from the end goal, it may vanish from sight altogether. One way of minimizing the chances that this will happen is to use **45** the heuristic method of *working backward.* It involves working backward from the desired goal back to the given conditions. This method is often used when the goal has more information than the givens and when the operations can work both forward and backward.

Obstacles to Solving Problems

Many factors affect success in solving problems. One such factor is level of **50** *motivation*, or emotional arousal. Too little emotion does not motivate, and too much may hinder the process of solution. Another factor that can hinder problem solving is *set,* the tendency to perceive and to approach problems in certain ways. Sets enable us to draw on past experience to solve a present problem, but a strong set can also interfere with ability to use new and different approaches to solving a **55** problem. People who are most successful in solving problems often are those who have many different sets at their disposal and can judge when to change sets or when to give up a set entirely. The point is to use a set when it is appropriate but not to let the set use you. One set that can hamper problem solving is *functional fixedness,* the tendency to perceive only a limited number of uses for an object. We **60** teach a child that the "proper" function of a spoon is stirring, not pounding. Much of how we form concepts involves learning the "right" functions of objects.

A. Match each problem-solving strategy (a-e) with its definition

_____ algorithm
_____ heuristics
_____ hill climbing
_____ means-end analysis
_____ working backward

a. rules of thumb that help to simplify and solve problems, although they do not guarantee a correct solution
b. strategy in which each step moves you progressively closer to a solution
c. step-by-step method that guarantees a solution
d. strategy in which one moves from the goal to the starting point
e. strategy that aims to reduce the discrepancy between the current situation and the desire goal at a number of intermediate points

B. Which type of strategy for solving a problem is described in each case below? Match the descriptions (1-5) with the terms (a-d).

a) an algorithm; b) information retrieval; c) hill climbing; d) working backward.

1. In trying to balance a budget, each reduction in expenses brings you closer to the goal and leaves you with a smaller deficit with which to deal.

2. On a multiple-choice test one useful strategy in answering each question is to eliminate the alternatives that are obviously incorrect. Even if it does not leave you with one correct answer, you are closer to a solution.

3. A pilot is expected to memorize the slowest speed at which she can fly a particular airplane before it heads for the ground. She has no time to calculate the correct answer.

4. If we wanted to spend exactly $100 on clothing, it would be difficult to reach that goal by simply buying some items and hoping that they totaled exactly $100. A better strategy would be to purchase one item, subtract its cost from $100 to determine how much money we have left, then purchase another item, subtract its cost, and so on, until we have spent $100.

5. You solve a mathematical problem by use of a formula.

Find the following words and phrases in the text above and choose the best definition for each word or phrase.

a) tempt (line 5): **persuade / have a desire**
b) continuous (line 15): **without a break / with a break**
c) a knack (line 20): **the ability to do something skillfully / the lack of such ability**
d) rules of thumb (line 33): **the rules regulating our movements / practical methods or procedures**
e) bring within reach (line 34): **establish communication with / come nearer**
f) discrepancy (line 40): **difference / indifference**
g) stray (line 43): **deviate from a direct course or subject / approach**
h) vanish (line 43): **meet / disappear**
i) at their disposal (line 56): **something that they have / something that they want to get rid of**
j) hamper (line 58): **prevent the free movement or activity / move forward**
k) pounding (line 60): **touching gently / beating heavily**

MINDBENDERS

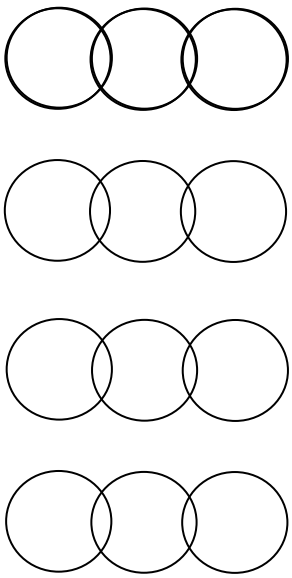
Words from words

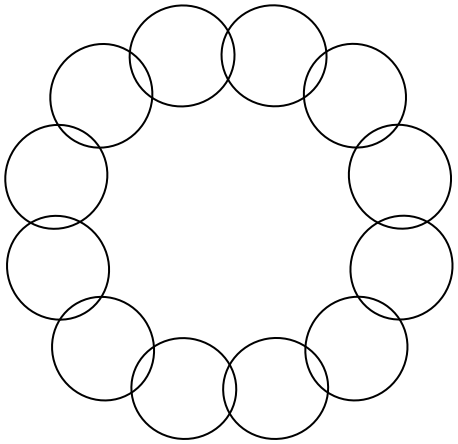
From each word in the list below try to make as many new words as you can. The first one is started for you. Score one point for each new word you make. The target number of words is given in brackets. Can you beat it?

1. evaluating: vague, lute, (10)
2. availability: (8)
3. language: (7)
4. problem: (6)

THINK AND DISCUSS

1. ***Try to solve*** *the four chains* ***problem described in the text above (lines 12-15).***





2. You are headed for Mount Everest, and you see it from a distance. You have no map. What is the best problem-solving strategy you can use to get there, and why?

3. Think for a moment of the last time you were confronted with a difficult problem. What types of thinking or reasoning did you use to deal with that problem? Now that you have read this text, would you respond differently if you were faced with a similar problem? Share your thoughts and ideas with the rest of the group.

LISTENING

CREATIVE PROBLEM SOLVING

Pre-listening

1. Here are some words and expressions used in the lecture, printed in boldface and given in the context in which you will hear them. They are followed by definitions.

the use of **flexible** thinking: something that can be changed easily
problems **call for** something: demand
the solution **"pops into your head"**: comes suddenly or unexpectedly
approaching it from a new **angle**: from a new way
to redefine the problem: to describe or explain again
some **evidence** suggests: facts or signs
Americans stress **self-reliance**: when someone is dependent on him/herself
eliminating possible frustration: getting rid of
while **paving the way** to learning more complex tasks: making the way to learning possible

2. Read the incomplete summary of the lecture and think about what kinds of words or phrases might go in the blanks.

Several strategies help us analyze and solve problems by looking at them from another (1)_____. Many problems rely on the use of (2)_____ and original thinking. (3) _____thinking is appropriate for problems that have one correct solution, whereas problems that have no single correct solution call for creativity – (4)_____ thinking, thinking that is original, inventive, and flexible. Taking a rest from a problem may allow you to discover a fresh approach through (5)_____. The technique of (6) _____requires an individual or group to (7) _____ numerous ideas and evaluate them after all possible ideas have been collected.

While-listening

A. Now listen to the lecture and check if you were right.

B. Listen again and answer the following questions:

1. What does the color idiom 'out of the blue' mean?
2. What strategy for creative problem solving is not mentioned in the incomplete summary above? What is the main idea of this strategy?
3. What qualities do Americans value in problem solving?
4. What is the Chinese approach to problem solving?

SURVEY

Think of the questions you would like to ask your fellow students to find out their approach to problem solving. Report the findings to the group.

READING

DECISION MAKING

A. How do people make decisions? Are there any approaches to decision making?

B. You are going to read the text about decision making. The names of the approaches have been removed from the text. Choose from the list A-E the one that fits each gap (1-5).

A. noncompesatory model
B. representativeness
C. conformation bias
D. compensatory model
E. availability

Decision making is a special kind of problem solving in which we already know all the possible solutions or choices. The task is to select the best alternative by using a predetermined set of criteria. There are several approaches to decision making.

In the (1) _____, we evaluate choices on various criteria and then examine how the attractive features of each choice might compensate for the unattractive ones. For example, if you are buying a house, one criterion might be that you prefer a brick house. You might, however, buy a wooden house if it is located in a good school district, has a pleasing floor plan, and is reasonably priced. In this case the attractive features compensate for the lack of a brick exterior.

Most people, however, do not follow such a precise system of making decisions. They use various (2)_____ in which shortcomings on one criterion are not compensated by strengths on other criteria. Especially popular is

the *elimination-by-aspects* tactic. In this case, we eliminate choices if they do not meet one or two requirements, regardless of how good they are on other criteria. For example, we might decide not to buy a car, regardless of all its advantages, because it costs more than another model. As a result, such a decision-making model can lead to a decision that is adequate, but not the best.

Choosing an appropriate decision-making model often depends on how much is at stake. We are more likely to use a compensatory model when the stakes are high: buying a home or choosing a college. When the stakes are low, the noncompensatory model usually helps us decide quickly such casual matters as which shoes to wear.

The heuristic of (3) _____ is widely used in making judgments and reaching decisions. We use it whenever we make a decision on the basis of certain information that matches our model of the typical member of a category. Representativeness can help simplify the decision-making process. For example, if every time you went shopping you bought the least expensive items, and if all of these items turned out to be poorly made, you might eventually decide not to buy anything that seems typical of the category "very cheap."

One potential shortcoming of representativeness is the tendency to stereotype; that is to attribute certain characteristics to all members of a particular group. For example, many people discriminate against all elderly people in filling a job without considering a particular person's ability to do the job. They have a stereotype of the elderly being incapable of certain tasks, and they judge all the elderly individuals as being representative of the general model.

Another common heuristic is (4)_____ in which we base a judgment or decision on information that is most easily retrieved from memory, whether or not that information is accurate. In one experiment, the participants were asked whether the letter *r* appears more frequently as the first or third letter in English words. Most people said first, but the correct answer is third. Their estimates were incorrect because they relied on the most available information in their memories, and it is easier to recall words that *begin* with *r* than words that have *r* as their third letter.

Another faulty heuristic is (5)_____– the tendency to seek evidence in support of our beliefs and to ignore evidence that contradicts them. Using an example from earlier in this text, suppose that you consider elderly people to be mentally slow. Every time you see an elderly person in need of care or assistance, you take it as evidence for your belief. However, you are likely to ignore the many cases of elderly people who are active, healthy, and leading very productive lives. As long as you ignore disconfirming evidence, your stereotype of the elderly is likely to remain unchanged.

For the most part, people manage to make reasonably satisfactory decisions in the real world. In part, this is because it is often possible to revise decisions if it appears that an initial choice is not optimal.

C. Using the information from the text about different approaches to decision making, fill in the gaps in the sentences below.

1. Bill is trying to decide between taking a ski vacation and a beach vacation. To make the choice, he sets up some criteria for a good vacation and then rates the two alternatives on each criterion to see how they stack up (compare) against each other. Bill is using _____ model of decision making.
2. Decision-making models that do not try to systematically weigh comparisons among alternatives are _____ models.
3. People are most likely to use a compensatory model when
   a. the stakes are low
   b. the stakes are high
   c. others are observing them
   d. the problem is simple

4. The tendency to look for confirming rather than disconfirming evidence for our beliefs is called _____.

D. (Pair Work) **You must decide between an inexpensive, noisy apartment with neighbours who are a nuisance, and a quieter, more expensive apartment with nice neighbours. How would you go about (do a task) making your decision using a compensatory model?**

CHECK BACK

1. The term that psychologists use to refer to all the processes whereby we gather and use information is _____
2. _____, _____, and _____ are the three most important building blocks of thought.
3. Categories for classifying specific people, things, or events are
   a. concepts b. images
   c. phonemes d. morphemes
4. Images help us think about things because images are more concrete than words. T/F
5. All of the following are potential obstacles to problem solving except

a. excitement
b. functional fixedness
c. sets
d. hill climbing

6. Our tendency to perceive and to approach problems in certain ways is termed a _____.
7. The tendency to perceive only a limited number of uses for an object, a tendency that interferes with the process of problem solving, is known as _____ _____.
8. In language, universal sounds, called _____, are combined to form the smallest meaningful units, which are called _____. These meaningful units can then be combined to create words, which, in turn, can be used to build phrases and whole _____.

SELF-STUDY

Suggested topics:
Culture and Decision Making
Nonhuman Language?
Becoming Better at Problem Solving
How languages evolved and how many languages are currently spoken worldwide
Sites to explore:
www.mla.org/census_main
http://www.littletree.com.au/koko.htm
For more information use GOOGLE

SCIENCE IN THE NEWS
Read the article and answer the following questions:

1. According to recent research, do people pay more attention to body language or mimicry?
2. How did De Gelder, the researcher of Tibulg University, prove it?
3. How many volunteers took part in the experiment?
4. How long did it take them to identify the wrong pictures?
5. What was used to check their reactions?

Германия: человек бессознательно воспринимает язык тела
Люди уделяют больше внимания языку тела, чем мимике, даже когда их просят сосредоточиться на выражении лица, утверждает новое исследование. Ученые

пришли к выводу, что интерпретация движений тела происходит подсознательно.

Данный механизм срабатывает в мозгу, как беззвучная сигнальная система, когда мимика человека не соответствует языку его тела.

Де Гелдер (De Gelder), ученый из Университета Тильбурга (Tilburg University), Нидерланды, делал фотографии людей, испытывающих страх или гнев. В состоянии страха тело принимает оборонительную позицию, ноги немного напрягаются, плечи отводятся назад. При гневе преобладает наступательная позиция с поданными вперед плечами и грудью.

Затем ученые создали 2 типа изображений: на одних выражение лица совпадало с движениями тела, на других – нет. Полученные фотографии предлагали проанализировать 12 добровольцам, реакция которых исследовалась при помощи электродов, измеряющих активность мозга. Подопытных просили сфокусироваться на мимике. Всего через 115 миллисекунд их мозг реагировал на «неправильные» фотографии. Такая сверхбыстрая реакция говорит о бессознательном восприятии.

Unit 8
LEARNING

Chapter 1
KINDS OF LEARNING

WARM-UP

English sayings and proverbs about learning and knowledge

Match the beginning of each proverb with its ending, and then answer the questions that follow.
The first one is done for you.

1. By doing nothing (e)
2. Live and
3. Learn to creep
4. Learn wisdom by
5. Little knowledge is
6. Who has never tasted bitter
7. Too much knowledge
8. Learn to say

a) by the follies of others
b) before you leap
c) a dangerous thing
d) before you sing
e) we learn to do ill
f) makes the head bald
g) knows not what is sweet
h) learn

- Which two proverbs have similar meaning?
- Which two proverbs are contradictory in meaning?
- Which of the sayings do you like best? Discuss your choice with a partner.

THINK ABOUT IT!

- Can you think of any examples of learning?
- Is learning and studying the same thing?
- Is it possible to learn as much from experience as it is from school?
- How do you learn best – from books or from direct experience?
- How do you learn English? What do you think is the ideal way to learn a second language?

READING

KINDS OF LEARNING

Pre-reading

1. You are going to read a text about learning. First check the meaning of the words in the box in your dictionary or with your teacher. Pay attention to the prepositions the words go with if any. Which words do the adverbs go with?

to equate relatively to encompass to elicit to emit to acquire punishment conducive directly scary

2. Which situations do you think these words refer to in the text?
3. Scan the text to see whether your predictions were correct.

While-reading
Read the text carefully and fill in the graph on the kinds of learning. Then check your answers with a partner.

Forms of Learning:	Basic	Complex
Their names:		Cognitive learning
Division into types:		
Examples:		

Common things for both kinds:		

Most people equate learning with studying. But psychologists define learning more broadly, as the process by which experience or practice results in a relatively permanent change in behaviour or potential behaviour. This definition encompasses classroom learning and studying, but it covers many other forms of learning as well: learning to turn off lights when we leave a room, learning which way to put the key into the front door lock, learning how to avoid falling down on skis, learning how to dance.

There are several different kinds of learning. A basic form of learning is known as conditioning. **Conditioning** is a general term – used for animals as well as for human beings – that refers to the acquisition of specific patterns of behaviour in the presence of well-defined stimuli. One type of conditioning is called *classical conditioning, or Pavlovian conditioning.* In this type of conditioning, reflexive behaviours are elicited by other, formally neutral stimuli. It focuses on behaviour that follows a particular event. For example, you might become tense or anxious when you hear the kind of music that always precedes a frightning scene in a scary film, because you have learned to identify this style of music with such scenes. In a second type of conditioning, known as *operant conditioning, or instrumental conditioning,* selected, voluntary behaviours are emitted in the presence of specific stimuli in order to gain a reward or avoid punushment. Teaching a dog to sit on command is an example of operant conditioning. In both cases, past experience in the presence of well-defined stimuli causes corresponding changes in behaviour.

In general, it is through clasical conditioning that we learn which environmental objects are conducive to survival and which are not; and it is through instrumental or operant conditioning that we learn how to acquire or avoid desirable and undesirable objects. Thus, classical and operant conditioning are essencial to our ability to survive in and adapt to a changing world.

More complex forms of learning are grouped under the heading of *cognitive learning* because they depend on thinking and reasoning processes, these include *insight* and *observational learning.* When you suddenly see a solution to a problem or puzzle, you are experiencing insight. When you imitate the steps of professional dancers you saw last night on television, you are demonstrating observational learning. Like conditioning, cognitive learning is one of our survival strategies. Through cognitive processes, we learn which events are safe and which are dangerous without having to experience those events directly. Cognitive learning also

gives us access to the wisdom of people who lived hundreds of years ago, and it will give people living hundreds of years from now some insight into our experiences and way of life.

Post-reading

1. **You are going to work in small groups of 3 or 4. Think of some other examples of different kinds of learning. Without naming them, share your examples with the other students. Let them identify the kinds of learning your examples refer to.**

VOCABULARY FOCUS

Word-building

A. Underline the words that have the same noun and verb forms.

define	dance
experience	study (2)
practice	depend
punish	reward
cause	imitate
change	command
teach	learn
puzzle	solve

B. Complete the table

Verb	Noun
1. equate	----------
2. define	----------
3. behave	----------
4. acquire	----------
5. stimulate	----------
6. respond	----------
7. focus	----------
8. select	----------
9. emitt	----------

10. survive ----------
11. cognate ----------

C. In the text *Kinds of Learning* find the following

1. Find an adjective which means ‘lasting or meant to last indefinitely’.
2. Find another phrasal verb which means ‘switch off’
3. Find a noun that means ‘gaining possession of something’.
4. Find a noun in the plural which means something that makes a person act.
5. Find a verb that means ‘do something before taking another action in time or order’.
6. Find an adjective which means ‘filled with worry’.
7. Find an adjective that means ‘necessary’.
8. In the last paragraph find a noun which means ‘having knowledge and experience’.

GRAMMAR FOCUS

Emphatic construction: It is.....that.....

1. In paragraph 3 of the text above find and study the sentences with this construction.

2. Make the following sentences emphatic using these sentences as an example.

- Through cognitive processes, we learn which events are safe and which are dangerous.
- Cognitive learning gives us access to the wisdom of people.
- Classical conditioning serves as a starting point for examining what learning is.
- Punishment can control behaviour.
- This kind of therapy provides an illustration of stimulus generalization.

3. Say it in English

- Применяя именно эти принципы, вы можете стать более успешным студентом.
- Именно от него зависит будущее сына.
- Только недавно аналитическая психология стала предметом изучения с исторической точки зрения.
- Именно за это исследование ученый получил Нобелевскую премию.

ENGLISH IN USE

- **Collocations**[35]

Read the text below and decide which word given after the text best fits each space. The exercise begins with an example (0).
Example: **(0)** B

An Australian scientist believes that if one were **(0)**__*able*__ to switch off the part of the brain that analyses information, then one would become a genius. This scientist thinks that the brain of an average person goes one step further than the brain and logically **(1)**_____ information in order to understand and interpret it. In ordinary people the brain takes in every tiny detail, processes all the information, **(2)** _____ edits it and leaves out all the unnecessary strange bits. **(3)**_____a single useful idea becomes conscious. In genius's mind the suppression and **(4)** _____of information does not happen and they see the picture in all the fantastically detailed way. These people can have incredible mathematical and creative skills as **(5)**_____as unusually effective insight and intuition. These abilities are lost as soon as people start critical **(6)**_____ of what they are doing. Interestingly, highly developed language **(7)**_____can hamper mental powers of a genius. That is why, perhaps, some of the autistic children with communication problems show an extremely high insightful **(8)**_____.

0	**A** capable	**B** able	**C** talented
1	**A** digests	**B** processes	**C** studies
2	**A** therefore	**B** after	**C** then
3	**A** Only	**B** Simply	**C** However
4	**A** publishing	**B** editing	**C** writing
5	**A** good	**B** soon	**C** well
6	**A** discussion	**B** evaluation	**C** processing
7	**A** skills	**B** talents	**C** gifts
8	**A** growth	**B** power	**C** potential

READING AND DISCUSSION

[35] collocation – the way in which some words are often used together.

COGNITIVE LEARNING

1. Read the text interrupted with questions and have a discussion.

What is cognitive learning?
What do you know about latent learning?

Much of the recent research in the area of learning concerns cognitive learning: What goes on inside us when we learn. Edward Chace Tolman was one of the pioneers in the study of cognitive learning. Early experiments by Tolman and other psychologists demonstrated that learning takes place even before the subject reaches the goal and occurs whether or not the learner is reinforced (reinforcer: a stimulus that follows a behaviour and increases the likelihood that the behaviour will be repeated). Tolman called this process **latent learning.** Since Tolman's time, a great deal of work has been done on the nature of latent learning. From their studies of how animals or humans find their way around a maze, a building, or a neighbourhood with many available routes, psychologists have proposed that latent learning is stored in the form of a mental image, or **cognitive map**, of the whole area. When the proper time comes, the learner can call up the stored image or map and put it to use.

- **What did Tolman's experiments show?**

- **In what way is latent learning stored?**

- **Why do you think it is called latent?**

Another phenomenon that highlights the importance of cognitive processing in learning is **insight**, learning that occurs rapidly as a result of understanding all the elements of a problem. Through insight learning, human and some nonhuman animals suddenly discover whole patterns of behaviour or solutions to problems.

- **What kind of learning is insight?**
- **How important is insight in cognitive processing?**
- **Have you ever had insight? Say what it was like.**

Social learning theorists challenge the idea that most or all human learning stems from classical or operant conditioning. **Social learning theory** focuses on the extent to which we learn not just from firsthand experience, the kind of learning explained

by classical and operant conditioning, but also from watching what happens to other people or by hearing about something. In fact, we can learn new behaviours without actually performing them or being reinforced for them. The first time you drive a car, you tend to drive carefully because you have been told to do so, you have been warned about driving carelessly. In other words, you learned a great deal about driving before you got behind the wheel of a car. This kind of observational or vicarious learning is quite common. By watching models, we also learn how to show love or respect or concern, as well as how to show hostility and agression.

- **What idea do social learning theorists object to? Why**
- **What kind of learning is very common?**
- **What can people learn through observation?**

Of course, we do not imitate everything that other people do. The distinction between **learning** and **performance** is crucial to social learning theorists: They stress that learning can occur without any change in behaviour.

- **What is the distinction between learning and performance?**

Social learning theory places emphasis on expectations, insight, information, self-satisfaction, and self-criticism. According to this view of learning, human beings use the powers of sight as well as insight, **hindsight**, and **foresight** to interpret their own experiences and those of others. By drawing attention to the importance of modeling, social learning theory also points out how not to teach something unintentionally. For example, suppose you want to teach a child not to hit other children. You might think that slapping the child as punishment would change the behaviour, while reinforcing more desirable behaviour. But social learning theory maintains that slapping the child only demonstrates that hitting is an effective means of getting one's way. You and the child would both be better off if your actions reflected a less agressive way of dealing with other people.

- **What do social learning theorists stress?**
- **How do you understand "hindsight" and "foresight"?**
- **How do you understand the sentence "But social learning theory maintains that slapping the child only demonstrates that hitting is an deffective means of getting one's way'?**
- **How did your parents deal with your bad behaviour?**

- **Do you agree with the last statement? Why?**

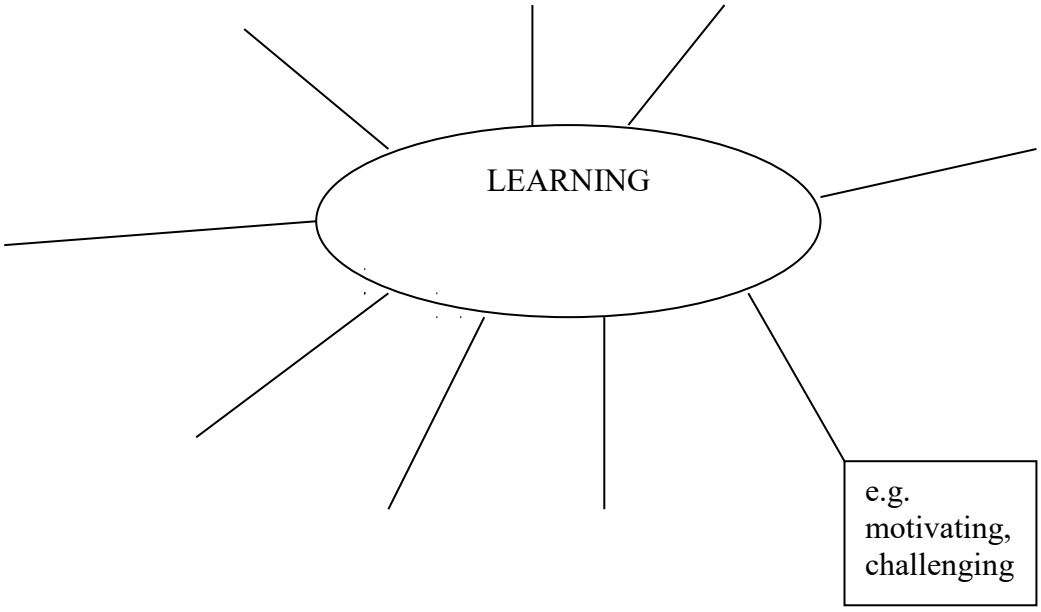
WRITING

Write a paragraph either for or against the statement *They know enough who know how to learn* (Henry Brooks Adams).

Chapter 2
STUDY SKILLS

WARM-UP

What comes to your mind when you hear the word "learning"?
In small groups complete the 'learning' mind-map, and then share your results with the rest of the class.



LISTENING

RIGHT BRAIN vs. LEFT BRAIN

Pre-listening

All the words in column A appear in the lecture you are going to listen to. Find their explanations in column B. This will help you understand the lecture better.The first one has been done for you.

A	**B**
1. mode (e)	a. assessment
2. sequential	b. very skillful
3. (at) random	c. academic
4. holistic	d. following in succession
5. adept	e. the way in which a thing is done
6. to downplay	f. a course of study
7. scholastic	g. to promote growth or development
8. curriculum	h. without a particular aim, or purpose, or principle
9. to foster	i. to minimize the importance
10. evaluation	j. considering a person or a thing as a whole

LISTENING 1

- **Listen and check your answers.**

LISTENING 2

- **The following is an incomplete summary of the lecture. Read the summary and think about what kinds of words might go in the blanks. The words in these sentences are given in a slightly different way from the words in the recording. Now listen and fill i n the missing words.**

RIGHT BRAIN vs. LEFT BRAIN

The two different parts of the brain _____ (1) two distinct ways of thinking.

The table below shows the differences between between left-brain and right-brain modes of thinking:

Left brain	Right Brain
(2)	Random
Sequential	(5)
(3)	Intuitive
Analytical	(6)
(4)	Subjective
Looks at parts	(7) Looks at...

Most people have _____(8) for one of these manners of thinking.
Left-brain individuals concentrate on logical thinking, analysis, and _____(9) while right-brained people focus on aesthetics, _____(10), and creativity. Schools tend to favour left-brain modes of thinking, while downplaying the right-brain ones.
If schools want to be more "whole-brained" in their orientation, they need to pay equal attention to the arts, _____(11), imagination and synthesis.
To promote a more whole-brained _____(12) experience, it is advisable for teachers to use techniques that _____(13) with both sides of the brain.
Teachers can incorporate more patterning, metaphores, analogies, _____(14), visuals, and movement into their activities.
Educators must think of new forms of_____(15) that value right-brained talents.

READING

Pre-reading

- **You are going to read an article called How to be a Better Student. With a partner, make a list of the pieces of advice you expect to read.**

Example*:* It is helpful to keep a daily checklist.

While-reading

A. Read the article and entitle the passages (1-7).

B. Find more expressions in the text which could go in the box below.

Giving advice and making recommendations

You are advised (not) to...

HOW TO BE A BETTER STUDENT

1 Everyone who goes to college wants to be a good student. The oldest known definition of education is "how people learn stuff." The key to the definition is the word "how." Thanks to a wealth of research on the principles which guide the phenemenon of learning, and on the nature of learning and memory, we know a considerable amout about how learning occurs and how we can make it better. It is by the application of these principles that we can become better students.

2. Anything worth having is worth planning for. Whether you have hope to learn to teach, to fly, to write for profit, or to change diapers correctly, you have in mind a goal. Now that you are a University student, it is clear that you want to succeed in your courses. This is a relatively long-range goal, and can serve a purpose in *keeping you on track*[36]. But our day-to- day behaviour is often hard to connect to our long-range goals. We need short-trem goals to keep us organized. We need three types of short-term goals. First, we need goals for the semester or term; second, goals for the week; and third, goals for the day.

3. At the beginning of each semester, we find ourselves immersed suddenly in many new courses. It is difficult to sort out the expectations and demands of these courses. Organizing this information is critical to completing all these requirements, and to success. If you can, obtain a large wall calendar, and mark on it all the dates of tests, exams, and term paper due dates. Now, estimate how long it will take you to make final preparations for those exams, and mark those dates as warning dates. You can help yourself to avoid the last minute all-nighters, if you simply determine the due dates for yourself, and mark those on the calendar too. Please be sure to avoid any days which have personal significance for you, such as birthdays, anniversaries, and the like.

[36] to be likely to achieve the result you want

4. Successful students also schedule their time weekly. If you have a part-time job, you must allow time for that. And, everyone needs some time for relaxing, eating, and sleeping, not to mention life's essentials: ice-cream and love. With all these things in mind, it is no wonder we find little time to study. But good students do all these things, too, yet they study. Do they have more time? No, we all have the same amount of time. But successful students schedule their time carefully.

As you make up your weekly schedule, you may find your study time in a large block. If this is true, please remember to take a short brak every 20 to 30 minutes. This is called distributed practice and is far more efficient than studying *for hours on end*[37]. After the first twenty or thirty minutes, most of us become much less efficient.

5. It is also helpful to keep a daily checklist, as a reminder of what must be done that day. Check off the things as you accomplish them.

If you have followed this carefully, you now have a large semester calendar plastered on your wall, a weekly schedule of major life events, classes, and study times, and a daily checklist of must-do items. We have to hurry now; it's time to go to class!

6. Many students believe that they can decide whether to go to class at all. They are misled! Students who do not attent class sessions almost always do more poorly on the tests and exams. Perhaps they were absent when a crucial item was discussed, or when the instructor lectured over the material this examination requires. The data show that those students who attend class regularly receive the highest grades and learn more, too! So, the first rule of effective studenthood is to attend classes.

7. Attending lectures is best done while taking notes. Use plenty of paper, and leave blank lines at regular intervals. When you take notes, write out the major points, and just make simple notes on the supporting minor points. If you miss something, approach the instructor immediately after the lecture. Within one or two hours after the lecture, but for sure on the same day, go back over your notes, and do two things. First, fill in the rest of the minor points. This often amounts to completing the sentence or other element. Second, write brief summaries and any questions that you now have in the blank you left earlier (clever of you to leave those blank lines!). These few minutes spent reviewing and organizing your notes will pay off in greatly improved memory. The questions you have you can ask in class, or during instructor's ofice hours, and reap two benefits. First, you will get the answers. Second, you will demonstrate that you are a serious student, and that will impress your instructor.

[37] without stopping

C. Choose the pieces of advice in the text which you consider the most important then discuss them with a partner or group. Share any other recommendations that you can make.

GRAMMAR FOCUS

Phrasal verbs

Look at these examples of phrasal verbs from the article. What do they mean?

- It is difficult to ***sort out*** the expectations and demands of these courses.
- As you ***make up*** your weekly schedule, you may find your study time in a large block.
- ***Check off*** the things as you accomplish them.
- When you take notes, ***write out*** the major points.
- Within one or two hours after the lecture, ***go back over*** your notes.
- These few minutes spent reviewing and organizing your notes will ***pay off*** in greatly improved memory.

Gerunds and infinitives

Look at these sentences from the text and underline all the uses of gerund and the infiniive in them. Why is the gerund or the infinitive used in each of the cases you underline?

1. Whether you have hope to learn, to teach, to write, you have in mind a goal.
2. Anything worth having is worth planning for.
3. Our day- to -day behaviour is often hard to connect to our long-range goals.
4. We need short-term goals to keep us organized.
5. This goal can serve a purpose in keeping you on track.
6. Organizing this information is critical to completing all these requirements.
7. Please be sure to avoid any days which have personal significance for you.
8. Attending lectures is best done while taking notes.
9. The first rule of effective studenthood is to attend classes.
10. This often amounts to completing the sentence or other element.
11. It’s time to go to class!

READING AND DISCUSSION

Your Preferred Learning Style

Read the text and identify your learning style. Share the results with a partner (partners). Explain why you think you belong to a certain style (styles).

A learning style is a way of learning. YOUR preferred learning style is the way in which YOU learn best. Three learning styles that are often identified in students are the **Auditory Learning Style**, the **Visual Learning Style**, and the **Tactile/Kinesthetic Learning Style**. Read about each of these learning styles to identify YOUR preferred learning style.

Are you an Auditory Learner?

Auditory Learners learn best when information is presented in an auditory language format. Do you seem to learn best in classes that emphasize teacher lectures and class discussions? Does listening to audio tapes help you learn better? Do you find yourself reading aloud or talking things out to gain better understanding? If YES, you are probably an Auditory Learner.

Are you a Visual Learner?

Visual Learners learn best when information is presented in a written language format or in another visual format such as pictures or diagrams. Do you do best in classes in which teachers do a lot of writing at the chalkboard, provide clear handouts, and make extensive use of an overhead projector? Do you try to remember information by creating pictures in your mind? Do you take detailed written notes from your textbooks and in class? If YES, you are probably a Visual Learner.

Are you a Tactile/Kinesthetic Learner?

Tactile/Kinesthetic Learners learn best in hands-on learning settings in which they can physically manipulate something in order to learn about it. Do you learn best when you can move about and handle things? Do you do well in classes in which there is a lab component? Do you learn better when you have an actual object in your hands rather than a picture of the object or a verbal or written description of it? If YES, you are probably a Tactile/Kinesthetic Learner.

Your learning style is your strength. Go with it whenever you can. When you can choose a class, try to choose one that draws heaviest on your learning style. When

you can choose a teacher, try to choose one who's teaching method best matches your learning style. When you choose a major and future career, keep your learning style firmly in mind.

CONDUCTING A SURVEY

Students in humanities and social sciences need to undertake surveys as part of their studies. Questionnaires may be a part of a survey and the results may be incorporated in a report. Practice in conducting surveys is also given through group projects.

Note: Do not use *questionnair*e to mean a study in which many people are asked questions to find out their opinions or behaviour'. Use *survey*: We conducted a survey (NOT a questionnaire) to find out what students think about time management.

Step One

Work on your own to study students' descriptions of a learning strategy below. Then answer the question: Do you use any of these strategies as a foreign language learner? Which ones? You can add more strategies if you wish.

a) When I read a text in which much of the language is unfamiliar, I 'guess' – I use my general knowledge of the world and knowledge of the particular topic to help me to understand.

b) When I come across a new word and I think I understand it and know how to pronounce it, I try to find opportunities to use it to see if I really can.

c) When I get 'stuck' reading something because the syntax or clause structure is so complicated, I try to translate that bit mentally to help me sort it out.

d) I use my bilingual dictionary a lot to try to find ways of expressing what I can already say in my own language.

e) When I am reading I ignore unfamiliar words, unless I come across them over and over again and I know I am missing something important.

f) I notice other students' mistakes – particularly if they are not speaking to me – and sometimes I realize I make that mistake myself. I try to remember the mistake and what the person should have said.

g) I like to repeat things over and over so that I can memorize them.

h) I rehearse to myself what I want to say before I have to say it; I feel more self-assured this way.

i) When I don't understand I keep nodding and pretending to understand so that they go on speaking and I get a 'second chance' to figure out what they want to say.

Step Two

Get together in groups of four or five to write a report of the main findings of the survey to share with the rest of the class.

Cover the following in your report:

- How many students participated in the survey (The survey was carried out among…..students).
- How many of them were male and female.
- The purpose of the survey (The purpose of the survey was to discover…).
- Did anyone add any other strategies to the list offered. If so, which ones?)
- What were the main findings? (The main findings were as follows…).
- Drawing conclusions.

Note: Avoid saying, 'Three students in our group use strategies a and c.' Say exactly what these strategies are. (e.g. Three students use a 'guess' strategy).

Useful language:

Most students choose to…; No-one uses…; Only one person (repeats, pretends etc.) To conclude, we'd like to say that the two (any other number) most popular strategies are…; It is clear that a majority favor ….

GROUP PROJECT

Constructing a questionnaire

In your group select one of the following topics for a questionnaire.

- Students' Use of Study Time.
- A successful student. Who is s/he?
- Does Punishment Work?

You are welcome to offer some other topic as well.

Note: Questionnaires can have different formats:

- Ticking items in lists or boxes.
- Writing numbers or brief information.
- A straight choice between two answers, e.g. *Do you agree…? Yes/No (or plus: Don't know).*
- Making choices on a scale, e.g. *What is your opinion of the course? Write a number on the scale 1-10 (where 1=very poor, 5=satisfactory, and 10=excellent).*
- Open –ended questions, e.g. *What did you enjoy most about the course? (and why?).*

Remember: – open-ended questions take longer to analyze and summarize;

- the questions must be clear, brief and not ambiguous in any way.

See other study skills resources at www.how-to-study.com

SCIENCE IN THE NEWS

Read the article and answer the questions:

1. What is the other name for *insight* and why?
2. What kind of experiment did John Konios and Mark Jung-Beeman conduct?
3. Which methods did they use?
4. Which parts of the brain got activated with people who had an insight?
5. What can be said about those people who took a methodical approach to the solution of mindbenders?

Вспышки озарения называют еще «ага-реакцией», подразумевая те восклицания, которые мы непроизвольно издаем, если внезапно начинаем схватывать суть проблемной ситуации, и видим из нее выход. Творческое озарение Архимеда, выскочившего из ванны с криком «Эврика!», – классическая иллюстрация озарения.

В исследовании, опубликованном в апрельском номере журнала «Психологическая Наука» Джон Кониос (John Konios) и Марк Юнг-Биман (Mark Jung-Beeman) изучали характер активности мозга непосредственно перед решением творческой задачи у 19 добровольцев. Участникам предложили несколько словесных головоломок, решения к которым можно было подобрать либо методически, либо благодаря внезапному озарению.

Используя такие методы как электроэнцефалография, ЭЭГ (electroencephalography, EEG) и функциональный магнитный резонанс (magnetic resonance imaging, MRI), исследователи определяли активность различных областей мозга. Они установили, что люди, на которых «находило озарение», характеризовались повышенной активностью височной (temporal) и лобной долей (frontal lobe) правого полушария головного мозга.

«Люди, у которых регистрируется активность в этих областях, обладают способностью переключить поток мыслей при необходимости решения новой задачи или подавить, заглушить нежелательные мысли в нужный момент», говорит Марк Юнг-Биман. Те же, кто подходили к решению задач методически, характеризовались активностью зрительной коры (visual cortex) левого полушария, что, говорят исследователи, свидетельствовало просто о концентрации на видеомониторе, на котором впоследствии появлялось задание головоломки.

(www.mentalhealthnews.com)

Учебное издание

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Иностранный язык (английский). Materials for Psychology students. Student's Book

Учебно-методическое пособие

Издается в авторской редакции
Компьютерная верстка: *С. В. Полякова*

Объем данных 2,03 Мб
Подписано к использованию 22.02.2022

Размещено в открытом доступе
на сайте www.psu.ru
в разделе НАУКА / Электронные публикации
и в электронной мультимедийной библиотеке ELiS

Издательский центр
Пермского государственного
национального исследовательского университета
614990, г. Пермь, ул. Букирева, 15