YEREVAN STATE UNIVERSITY

M. Apresyan, D. Bagiryan

a NEW GLIMPSE INTO SCIENCE

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Սույն դասագիրքը նախատեսված է բարձրագույն ուսումնական հաստատություններում անգլերեն լեզուն ուսումնասիրող կենսաբանության, էկոլոգիայի, բժշկության և հոգեբանության ուսանողների համար: Այն համապատասխանում է ժամանակակից մեթոդաբանության պահանջներին և նպատակաուղղված է տեքստերի և վարժությունների միջոցով զարգացնելու ուսանողների բանավոր ու գրավոր խոսքը:

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To the student

"A New Glimpse into Science" has been written and organized to help the students and adult learners to succeed in their science class in English.

In using "A New Glimpse into Science" you will increase your knowledge of topics such as *Pollution and Environment, Health, Cloning, Artificial Reproduction, Smoking and Alcohol, etc.* The book helps to understand and use the language of science in English. It provides learners with models of speaking, writing and reading in science. It consists of 10 topic–based units with motivating and stimulating materials to help students develop and practice their language skills. Through authentic and engaging tasks the text-book offers some guidance on how to write essays, business letters, summaries and reports. The new Listening and Case study sections will provide students with authentic materials developing their listening, speaking and research skills.

The appendix at the back contains texts for additional reading which relates to the topics and vocabulary presented in each unit.

The closing up glossary includes the explanation of about 150 scientific terms used in the book.

We hope that "A New Glimpse into Science" will help you improve your language skills, as well as explore your interests in some of scientific fields.

Unit One

Science and Technology.

- **Speaking and Reading**
  Pre – reading task.

Study the following phrases for presenting an argument.

One advantage/disadvantage is that you have to travel much.

Another point is that you can eat in good restaurants, visit museums...

All things considered, city life is full of bustle and variety and you need never feel bored.

To sum up/in conclusion city life can be particularly appealing to young people.

Moreover/what is more, when you want to relax, you can usually find a park where you can feed the ducks or just sit on a park bench.

Discussion

Work in two groups.

Group A: Make a list of some of the problems faced by people living in previous centuries that are not such problems now.

Group B: Make a list of some of the problems we face now that didn't exist before.

Role-play

Work in pairs

Discuss the problems that group B listed. What will happen in the future? One of you is an optimist and thinks that all the problems will be solved. The other is a pessimist and expects the worst to happen.

Now read the text and compare the problems that you listed with the problems presented in the text.

Technology and the environment.

There are a lot of grim statistics about the hazards that threaten our planet.

One of the crucial problems we face now includes rapid population increase, which will really hit us in the middle of this century. Another problem is the misuse or abuse of the world's resources, both the renewable resources, such as the clean air, clean water, and the non- renewable resources, such as oil and gas. Finally, there are the appalling problems of poverty and famine and hunger.

If we take a brief look at the changes of the society of the last fifty years, we will see that the march of technology has made the world a poorer place, in spite of all the benefits it has brought. There can be no doubt that the balance of nature is seriously affected by industry. The air we breathe, the water we drink, the land we till have become polluted by industrial waste. Modern technology has led to mass production of cheap and often shoddy goods, as well as increasing demand for something new and different. In fact, our planet is littered

with unwanted rubbish, and we are destroying everything beautiful around us; the land itself, together with flora and fauna.

Modern technology itself does not present a problem. It is our misuse of technology which has made it a curse to the world and which has brought us to the brink of disaster through pollution and the threat of nuclear warfare.

Damage we have done can never be repaired.

Nevertheless, something can be done if we become more aware and more responsible. Pollution can be controlled, waste products can be recycled, raw materials can be used more efficiently. Modern technology has become a curse rather than a blessing in the result of man's greed and selfishness. The man has progressed blindly and without thought of the future. Either we do something now, to change our attitudes, or we will not have a world to live in.

Comprehension check
Is a) b) or c) correct in each statement below?

1. One of the crucial problems we face is...
    a) the rapid growth of population
    b) development of people
    c) long life expectancy of population

2. March of technology has lead to...
    a) development of industry
    b) ecological misbalance
    c) production of necessary goods

3. ... has brought us to the brink of disaster.
    a) Misuse of technology
    b) Technological progress.
    c) Insufficient amount of technological equipment.

4. We still can escape catastrophes if we ...
    a) stop technological progress
    b) destroy all factories
    c) realize what we do.

- **Vocabulary**
  Synonyms

1 Working in pairs find a word in the text that means:

a) a lot of(adv)
b) unpleasant and depressing(adj)
c) a time when there is very little food in a region(n)
d) advantages(n)
e) to have an influence on smb\sth(v)
f) forward movement(n)
g) to make untidy(v)

2 Match a word in A with a synonym in B.

A		B	
environment	rubbish	surroundings	risky
hazard	shoddy	litter	growing
increasing	damage	danger	depressing
dangerous	grim	of poor quality	harm

3 Match each expression on the left with its meaning on the right.

1	The crucial problems we face are...	a)	we almost experienced a catastrophe
2	If we take a brief look....	b)	if we try to observe
3	There can be no doubt about sth...	c)	you can be sure/ certain about sth
4	It has brought us to the brink of disaster...	d)	the most important problems we deal with are...
5	It has become curse rather than a blessing...	e)	it has caused more harm than good...
6	The man has progressed blindly...	f)	the man has advanced and developed without thinking of future

Read the text and think of some more scientific developments besides those mentioned in the text.

The Nature of Science

Few subjects cause more interest than science. Science is the knowledge of all aspects of the universe and the way it works.

Many discoveries in science increase our comfort and well-being. Medicines made in space, freeze-dried foods and materials that dissolve cavities are products of modern technology.

Technology is the use of scientific knowledge in practical way. A chemist might discover a new substance that picks up oxygen from air. Another scientist might find a way to use that substance to make artificial blood. This blood would carry oxygen to body parts. The products of technology are everywhere. Artificial skin for burn patients, improved running shoes, drugs that clear fats from the walls of blood vessels, artificial hip joints are all products of technology.

But not all technology is thought to be helpful...New laser surgery is fast and cuts down on the chance of infection. This is helpful. However, other new products of technology may produce air and water pollution and these side effects might be harmful.

1 Answer the questions:

1 What is science?
2 What are some of the products of modern technologies?
3 Which are the positive and negative sides of technology?

2 Fill in the gaps with the appropriate words and expressions from the box.

achievements, declared, statement, life expectancy, mankind, wonders, reputable, surgeons

Wonders of the modern world

I don't believe that today's _____ are similar in kind to the wonders of the ancient world. They were all buildings and statues. In the last two centuries we have seen unprecedented technical and

scientific _____. These are surely our modern wonders.

Only a few years before men were walking on the moon, _____ scientists _____ that it was impossible. But in 1969 Neil Armstrong stepped out of his space capsule and made his famous _____: "That's one small step for a man, one giant leap for mankind".

Surely nothing has done more for the comfort and happiness of _____ than the advance of medical knowledge! How many millions of people have benefited from the humble aspirin? How many lives has penicillin saved? _____ can perform the most amazing operations. Average _____ in Europe has risen dramatically over the last hundred years, from about 50 years in 1906 to about 75 years today.

3 Put the paragraphs in this story into correct order.

The silent destroyer.

A Besides Danny's symptoms, there are other early signs of lead poisoning. Young victims may feel weak or suffer headaches and muscle pains. They may become clumsy and drop and break objects. As time goes by, the young person may have stomach pains and complain of a bad taste in the mouth. If the symptoms are ignored, the young victim may become blind and deaf. Many children die each year of lead poisoning

B Danny's mother took him to the doctor. She told the doctor about Danny's symptoms. She also said that Danny seemed all right just two weeks ago.

C The doctor took blood and urine samples from Danny. Tests on the blood and urine showed that Danny had lead poisoning. Lead poisoning results from the increased build up of lead in a person's body.

D Danny is eight years old. He cannot stand still. At home he wanders around the house, often stumbling. Sometimes he paces back and forth like a caged lion. Danny has trouble doing his homework. He cannot pay attention or think clearly. At school he picks up fights with his friends. He always seems tired, yet has trouble falling asleep at night.

E What is the matter with Danny? Is he just going through the "bad little boy'' stage of life? Not quite!

LISTENING

T. 1 Listen to the following passage.

What invention does the speaker talk about?

What benefits could it bring to humans?

Why has it vanished?

Listen again and fill in the gaps

The Vanishing Invention

In 1998, a Valencian professor made an _____ claim. Professor Antonio Cervilla discovered how to use water as a substitute for petrol.

The _____ said that you could drive from Bilbao to Valencia on just half a liter of water. His _____ uses a molybdenum compound to break down water into hydrogen and oxygen. _____ other methods no electricity is required and the reaction happens at atmospheric temperature.

This _____technology is based on the way plant enzymes break down water. The use of molybdenum is the perfect _____ because, although rare, it is cheap and found all around the planet.

Since the claims were made, nothing more has been heard about this fabulous technology. There is no explanation for the _____ anywhere on the internet, apart from a list of similar inventions which have also vanished. An _____ from the Philippines called Daniel Dingel developed a water- fuelled car but was arrested at the age of 82 and sentenced to 20 years in prison.

If this technology were to become widely available, it would prove_____ for petrol station owners and would also save the planet from the impending environmental catastrophes being caused by _____.

SYNONYM MATCH: Match the following synonyms from the listening passage:

claim	decompose
rare	disappear
vanish	infrequent
break down	assert
impending	accessible to everybody
widely available	approaching

- **Writing**
  Presenting an argument.

1 Joining contrasting ideas.
Join a sentence in A with a linking device in B and a sentence in C.

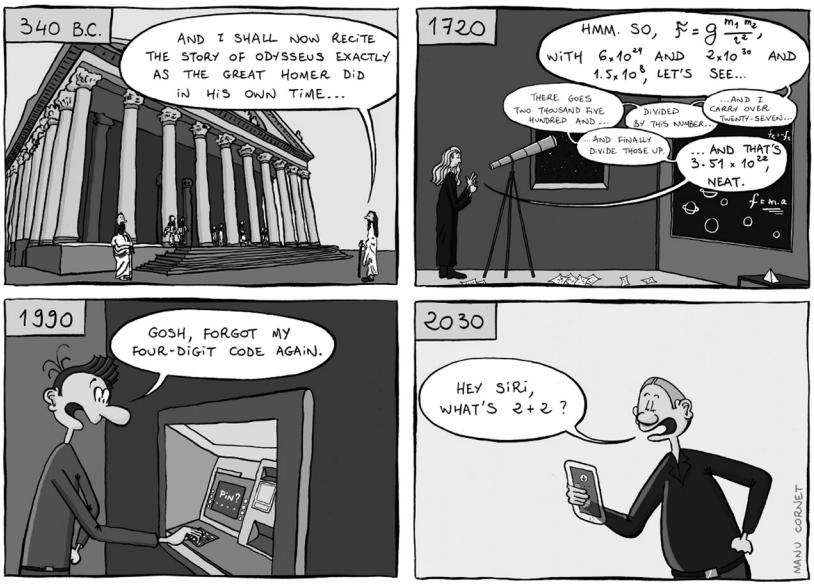
A	B	C
We're destroying everything beautiful around us	*although*	the fact we live here.
We don't stop the march of technology	*However,*	our misuse of it made it a curse to the world.
Many discoveries in science and technology increase our well –being.	*Nevertheless,*	some other present real danger
Damage we have done can never be repaired.	*despite*	something can be done if we become more responsible..

2 Complete the following sentences in an appropriate way.

a) I wanted to go on holiday, but . . .
b) I always wanted to be a doctor. However, . . .
c) The holiday was enjoyable despite . . .
d) He passed the exam although . . .
e) The prisoner was kept under tight security. Nevertheless, . . .

3 Write sentences of your own, using linking device.

4. Look at the picture and write a story about technology effect on the evolution of humanity including the phrases below.



Throughout the human history the man has been progressing at a great speed.

The antique world is famous for ……. The ideas of Aristotle……. The philosophy of Socrates……Classical antique literature began with Homer's Iliad and Odyssey.

Then in the middle ages the progress continued reaching its peak in the period of Renaissance. The ideas of Da Vinci, Copernicus, Galileo revolutionized ……..

However, the biggest breakthrough came in the 20th century. It seemed that human brain would continue to develop, bringing new miracles. One of such miracles was…….. ……..made life easier. ……Unfortunately, on a more global scale people……. They got used to…. Very soon,……unable to make simple calculations. …….. too much dependent on technology. As a result,…….

Case study

Communication technology

Introduction

Communication is a process in which ideas, information or feelings are exchanged to the maximum benefit of all parties.

We communicate every day. We speak, write and draw to let people know what we are thinking and feeling. When those people respond, our communication becomes interactive or two-way. All communication involves a sender, a medium (such as voice, image or print), and a receiver.

Communication Technologies make it easy to talk to a friend next door or around the world. We can call them on the phone, e-mail them or put up information on our web pages.

We also receive information daily through a variety of sources. We listen to the radio, watch television, and read magazines for both information and entertainment. Businesses use communication technologies when they advertise to sell us products and services. In fact, Communication Technology is a big business in itself. Our basic need to communicate for fun and profit drives these industries.

This Case study activity will challenge you to learn more about 6 popular Communication Technologies**: Radio, Telephone, Television, Satellite, Computer & Printing.** You will discover not only their origins and inventors, but also how they work and how they help people communicate today. In the end, you will evaluate their effectiveness as communication media**.**

Task

You are employed by a well-known advertising agency. Your company has been hired by one of the six Communication Technology Industries to create an educational/promotion piece that will tell the public all about them. Your clients want you to include something about the history and development of their product/industry, explain how their technology works and show their strengths in the area of communication.

First you will need to research that one area of Communication Technology, answering the questions provided on that page. Then it is up to your team to choose a medium to communicate the information that you have found. Put your findings in an appropriate format and present this to your client (class).

Questions

1. When was the first medium invented?
2. Who is credited with its invention?
3. What are the important facts about its history and development?
4. How does the medium work?
5. When, where and by whom was the first computer network / radio/TV broadcast/printed press created?
6. What is the role of the medium in communication today?
7. What are the advantages and disadvantages in using this medium?
8. Which of the following communication methods does the medium utilize?
   - One way
   - Two way
   - People to people
   - Machine to people
   - Machine to machine
9. Construct a communication model to demonstrate how this medium is used today?
10. Evaluate the effectiveness of this medium to communicate information.

Process

1. Divide your research among members of the group. Set deadlines so that you will have all work completed on time.
2. Answer all the questions on your page. You are to use the resources provided on the appropriate page. Keep track of which site you use to answer individual questions. You will need to turn in a copy of your answers with your final product.
3. Decide what format you will use to communicate the information you have found. Be creative in your approach. Note: you will get more credit for using a medium that simulates your area of technology. For example, you might create an audio tape of a radio broadcast that might be aired to educate the public about radio and promote the radio industry. You might create a videotape of a television segment to promote the television industry. A brochure would be a suitable product for the printing industry.
4. Be sure that all the answers from the questions are answered in your product.
5. Divide your duties as evenly as you can when you plan and produce your promotional product for your industry.
6. Your group's work will be evaluated and your individual work will also be assessed.
7. Your team will make a formal presentation of your product to the client/class who will then evaluate the effectiveness of your communication. A professional presentation will have a positive effect on the audience's impression of your work.

Unit 2

Weather and illnesses

- **Speaking and Reading**
  Pre- reading task
  Study the following phrases.

Living in a city has both **pros and cons/advantages and disadvantages.**
For instance you can organize your leisure more efficiently.
It is **especially/particularly** difficult to find good, cheap accommodation.
However, for every plus there is a minus.
Finally/last of all, it is still possible to feel depressed even in good weather.

1 Answer these questions with other students.

1 Which type of weather do you usually have in your country in

a) January b) April c) July?

2 What weather makes you feel most irritable?

3 What weather makes you feel most energetic?
4 What weather /seasons do you associate with

a) coughs/ colds b) sore throats/ runny noses?

2 Check the meaning and pronunciation of these illnesses in your dictionary.

depression asthma a heart attack a stroke
rheumatism migraine skin cancer

3 What do you think? What types of weather can cause these problems to health?

Read the article quickly and check your answers.

Why you feel under the weather

Most of us usually tune in to the weather forecast to find out whether we should take an umbrella to work or not. But perhaps we should listen more carefully, because the day's weather could seriously affect how we feel.

Of course, we mostly feel better when the sun shines and worse when it rains. But scientists and doctors are starting to realize that ordinary cold weather can bring depression, severe headaches and asthma. Growing numbers of people are being diagnosed as weather sensitive.

The hazards of hot climates are well known, particularly the danger of the sun's rays leading to skin cancer. But did you know that high temperatures can lead to strokes and heart attacks?

Certainly, sufferers from rheumatism and asthma have long complained of feeling worse when it rains, but more dangerously, a very cold period can bring on fatal heart attacks and strokes in the elderly.

It may come as a surprise to learn that even temperate climates present a health risk. 500,000 people in Britain are said to suffer from Seasonal Affective Disorders (SAD), brought on by low cloud and

the long dark nights of winter. People with SAD become extremely depressed due to changes in their brain biochemistry. They sleep for many hours but never feel rested. They are irritable and feel incapable of work or socializing. But they feel better as soon as the days start to get longer and 80% of sufferers are helped in the winter months if they spend two hours a day under artificial lights

1 Comprehension check:
1 ***Is a) b) or c) correct in each statement below?***

1 The article advises us to listen more carefully to the weather forecast to find out
a) if it's going to rain
b) if it's a good day for walking
c) if we're going to feel well.

2 We usually feel depressed if
a) it's too hot
b) it's cold and wet
c) it snows.

3 The writer thinks that for hot weather people understand
a) all the health problems
b) some of the health problems
c) none of the health problems.

4 The most serious problem for old people in the cold is
a) their rheumatism
b) their asthma
c) their heart.

5 SAD sufferers are thought
a) to have a real illness
b) to be pretending because they don't like work
c) to be afraid of sunlight.

6 SAD sufferers are helped by
a) sleeping for many hours

b) staying up longer
c) spending time under lamps.

2. Put the following phrases from the text into your own words:

a) Many of us usually tune in to the weather forecast...
b) Growing numbers of people...
c) ...a very cold period can bring on fatal heart attacks and strokes in the elderly.
d) They are irritable and feel incapable of work and socializing.

- **Vocabulary**

1. Match each word or phrase with a phrase describing it.

1 weather forecast	a) greatly or easily affected by weather changes
2 skin cancer	b) intense pain in head
3 stroke	c) sudden serious illness in brain that can cause loss of the power to move or speak clearly
4 severe headaches	d) skin disease caused by an abnormal growth of cells which often leads to death
5 weather sensitive	e) to a high degree sad
6 incapable of socializing	f) unable to mix with others
7 extremely depressed	g) a statement that predicts weather

2 Making sentences stronger
Adverbs and adjectives that go together

1 Look at the adjectives in the box. Find some with similar meaning. Which adjectives go with which of the adverbs on the left? Why?

very ***absolutely***	good bad big starving valuable silly disgusting fabulous funny interesting incredible pleased exhausted delighted clever priceless dirty beautiful hilarious tired ridiculous awful freezing hungry terrified surprising huge right filthy fantastic gorgeous cold

2 Make short dialogs using adjectives from the box. You could talk about films, books, the weather, holidays, sports, people you know, yourself.

Read the text. What do you think of the following predictions?

The temperature's rising

A government report says that in the next twenty- five years, Britain will get warmer and have higher sea levels. The weather will become more Mediterranean, and tourism will grow, but the Scottish ski industry will disappear because there will be little or no snow, and there'll be stronger winds. In the South there'll be more sun, enough to produce wine, and in the North there will be more rain. It'll be good for farmers, as the crops will grow more quickly, and cattle and sheep will have warmer and wetter land in Scotland and northern England. But the higher sea level means that many towns, including London, will disappear under the water.

1 Here are some more worldwide predictions. Which do you think will be true?

1 Temperature will rise by two to six degrees Celsius in twenty-five-year time.
2 Ice in the North and South Pole will melt.
3 Whole countries will disappear underwater.
4 There won't be enough fresh water for everyone.
5 Fresh water will cost more.
6 The world economy will get worse.

2 Work in groups of two and three. Make other predictions about the future. Then tell the others about your predictions using discourse markers. Do they agree with you?

Example: There'll be more people in the world.

3 Put one of the following markers into each gap.

what is more	personally	moreover
that is why	obviously	generally speaking

a) Many people like pets, but _____ I cannot bear them.
b) _____ I haven't got any in my house.
c) _____, people have pets for companionship.
d) _____, they need to be looked after carefully.
e) I find them noisy and smelly. _____, they can be very expensive.

1 Put the paragraphs in the following story in the right order

A Later they met two other climbers who were looking for them. When it began to get dark again they stopped in a snow hole and ate the last food they had. That night a terrible snow storm started. The storm lasted two days, and the climbers couldn't go on.

B They had to go down quickly when it was getting dark. On the way down Scott made a mistake. His foot slipped on the ice and he hang on the rope which swung him against a big rope. He broke both his legs.

F On July 13, 1977, they were on the top of this mountain. They were the first men on that mountain top. They were very happy.

G Doug Scott climbed the Ogre, an 8000 meter mountain in the Himalayas with a friend.

C There were more snowstorms. They spent the nights in a small camp. For Scott and his friend it was the sixth day without food. They were looking forward to their main camp – only one more day to go down.

D They found the other camp empty, too. But there was food. Their friends had gone to the nearest village to find help. The next day they came back with some men from that village. They carried Scott and his friend to a small airport. Scott had lost 18 kilos. But he was alive.

E They got there on July 20. The storms had destroyed the camp. There was nothing left, no food, nothing. There was another camp 7 kilometers away.

H The two men could not go on during the night and they could not sleep. It was much too cold for that. They knew that they would never wake up again at 40 degrees below zero. They rubbed their feet all night. Next morning they went down. For Doug this was a painful thing. He could not walk. He had to crawl all the way.

I Scott had to crawl all the time. His knees were bleeding and they were dirty. He and his friend needed a doctor.

LISTENING

Before you listen match the pictures on the left with the weather type on the right.

Cool

Cloudy

Downpour

Hot

Warmly

Thunderstorm

Sunny

Rainbow

T. 2 Complete this exercise while you listen. Match the two halves of the sentence and write a – d next to the number 1 – 4.

1 The weather in the north is mostly…	a. rainy
2 The weather in the east is mostly…	b. cloudy and sunny
3 The weather in the west is mostly…	c. dry and cloudy
4 The weather in the south is mostly…	d. windy

Listen again and fill in the gaps.

1. Welcome to the weather forecast. Now, let's see what the weather is _____ today.
2. In the north of the country it's very windy and cold. There is a _____ of some rain, too.
3. The temperature is around 10 _____ centigrade.
4. In the east it's rainy all day, I'm afraid. There may be a thunderstorm in the afternoon. The_____ is a bit higher, at around 13 degrees.
5. In the west and middle of the country the weather is dry _____ cloudy.
6. The south of the country has the _____ weather today. It's cloudy most of the time butsunny this afternoon.

What is the weather usually like in your city or town?
It's usually … (hot/ cold/ windy etc.)
It usually … (rains/ snows etc.)

Writing:

1 Writing an essay

Look at the first paragraph, and the possible organization of the other paragraphs, for an essay entitled ‘ Modern technology.’

para. 1 *Introduction*	There are several ways of looking at the role of technology and I’d like to start by considering objectively all the advantages and disadvantages of it.
para. 2 *Positive sides of technology*	Technology has brought us numerous benefits . . .
para. 3 *Negative sides of technology*	However, . . .
para.4 *Your personal opinion*	Personally, I . . .
para 5 *Conclusion*	Finally, . . .

Complete the above essay, or write an essay with similar organization on any of the following topics.

Our health and weather changes.

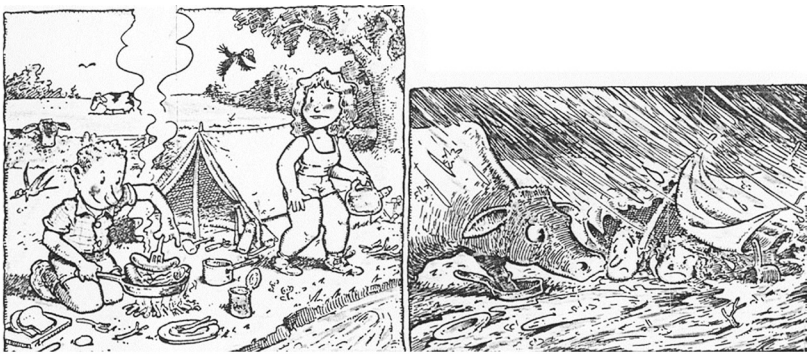
Life in future.

Environment affects our life more than genetics.

Healthy behaviour extends our life.

2 Look at the picture and write the story about the unfortunate couple. Include the following phrases.

fantastic weather	low clouds
fabulous place	awful thunderstorm
absolutely delighted	scared to death



Idiom Time

English Idioms: Weather

Raining cats and dogs

Raining very heavily.

Face like thunder

Being clearly very angry or upset.

Snowed under

Having too much to do.

Under the weather

Feeling unwell, sad or lacking energy.

Storm in a teacup

Exaggerate a problem.

Chase rainbows

Try to achieve the impossible.

Lightning fast

Being very fast.

Head in the clouds

Have unrealistic or impractical ideas.

Fill in the gaps with one of the weather idioms.

1. I've been feeling _____ lately and have lost my appetite.
2. I can't go to the party on Saturday because I'm _____with work.
3. Don't go out now. It's _____. You'll get wet through.
4. Is something wrong with Jim? He is sitting with _____.
5. Marjory is still very romantic. She is out of touch with reality and has always got her _____.
6. Don't worry I'll get to the bank before they close. I promise, I'll be _____.
7. I don't think my parents ever believed I'd make it as an actor. I think they thought I was just_____.
8. I think it's all a _____ - there's probably no danger to public health at all.

Use the idioms in the sentences of your own.

Case study

Severe weather

Introduction

Hurricanes, tornados, floods, and blizzards. Each is potentially dangerous and causes millions of dollars damage. But which is the MOST severe? Which would cause the least amount of damage? Where do these types of weather occur? It's up to you to answer these questions!

Task

Greetings! We are planning to move our company, Wham Incorporated, to a different part of the United States because we are not getting any business in the hot desert of Arizona. The four states we are considering are Florida, Texas, California, and New York. However, there is a catch. Each of these four states experiences different types of severe weather. Florida experiences hurricanes, Texas has tornados, there are floods in California, and New York encounters blizzards. You have been chosen to evaluate the four extreme weather conditions to determine which state would be the best to relocate to. We are looking for a place that the severe weather leaves the least amount of damage and we can easily prepare for. Thank you in advance for your help.

Process

1. Each one of you will become an expert on one type of severe weather. The head meteorologist, (your teacher), will assign you a type of weather and your job is to find out what your type of weather is and how it is formed, how much damage it does and costs, safety precautions to take, and the biggest recorded storm of that nature.

Jobs:

Hurricane Expert
Florida - Hurricane

Name:	Florida - Hurricanes
What is a hurricane? How is it formed?	How much damage does a hurricane cause? What is the cost of the damage
What safety precautions are there for hurricanes?	What is the biggest recorded hurricane?

Tornado Expert
Texas - Tornado

Name:	Texas - Tornado
What is a tornado? How is it formed?	How much damage does a tornado cause? What is the cost of the damage?
What safety precautions are there for tornados?	What is the biggest recorded tornado?

Flood Expert
California - Flood

Name:	California - Floods
What is a flood? How do they happen?	How much damage does a flood cause? What is the cost of the damage?
What safety precautions are there for floods?	What is the biggest recorded flood?

Blizzard Expert
New York - Blizzard

Name:	New York - Blizzards
What is a blizzard? How is it formed?	How much damage does a blizzard cause? What is the cost of the damage?
What safety precautions are there for blizzards?	What is the biggest recorded blizzard?

3. Now you are ready to research! When you are finished, meet back with your group.

4. Now that you have become an expert on your weather condition, you need to share this with the members of your group. After sharing, your group must decide which state our business should move to. Please take into consideration that we are looking for a place where the weather does the least amount of damage and we can prepare for with safety precautions.

Florida – Hurricanes

Texas – Tornados

California – Floods

New York – Blizzards

5. Now that you have decided, you must design a poster to present to the company. The poster must include what the weather is, amount of damage and cost, safety precautions, and biggest recorded storm(s). Remember to include pictures! Do your best work because it will be graded. You will also receive a group grade based on how well your group works together.

Unit 3

Smoking and alcohol.

- **Speaking and Reading.**
  Relaxation and Inspiration.
  Pre reading task

1 Study the following polite expressions. In order to be polite when you are speaking English you need to use these phrases.

I'm afraid there's been an accident.
' Do you have any decaffeinated coffee?'
'**I'm afraid not**'
I wonder if I could have a copy of that letter.
Do you think I could/ Would you mind if I left a few minutes earlier
Excuse me could you tell me the way to the station.
Excuse me/ Pardon me, I didn't see you there.

2 The following article discusses aids to relaxation and inspiration. Before you read it, discuss relaxation and inspiration aids (food, drink, yoga etc.) that you find useful and that help you work and think creatively. Make a list of aids.

Read the text and underline all the relaxation and inspiration aids mentioned. Would you be willing to use all of them?

Think with a drink

Alcohol is well known to relax the inhibitions. It helps people to 'let go' and can set the stage for originality and inspiration.

William Faulkner said he couldn't begin writing without a bottle of Scotch nearby, and many other writers have used alcohol to fire their creative urge.

Ernest Hemingway was one. Only he needed coffee and cigarettes, too, and eventually contracted lung cancer, probably caused by his heavy smoking.

Drink is one of four basic types of aids to inspiration. The other three are:

- Stimulants such as coffee, tea and chocolate.
- Drugs that alter the state of consciousness, such as mescaline and LSD.
- Mixed stimulant- depressants, such as red wines and cigarettes.

Large meals seem to act against creative impulses. Perhaps the old cliché that an artist has to be hungry to reproduce his best work has basis in fact as well as finances.

Fasting, on the other hand, seems to induce an altered state of mind. Religions throughout the world recognize this and almost all of them include some fasting as part of their ceremonies.

The key to learning seems to be plenty of protein.

But avoid depressants such as beer - it contains hops, which are a sedative – jasmine tea, thyme and marijuana.

Comprehension check

1 Explain the title of the article.
2 Are the following statements true or false?

a) Alcohol makes people more creative.
b) Many writers used alcohol and cigarettes to help them work and think creatively.
c) A hungry artist becomes inhibited.
a) Beer calms the nerves and makes people sleepy.

3 Explain the phrases in bold.

Alcohol is well known ***to relax the inhibitions****.*
It helps people ***to 'let go'*** *...*
...and many writers have used alcohol ***to fire their creative urge****.*
Drink is one of four basic types of ***aids to inspiration.***
Fasting ... seems ***to induce an altered state of mind***

- **Vocabulary**

1 Complete the expressions and find their meaning by matching each phrase on the left with a word or phrase on the right.

1 he found the key to
2 alcohol can set
3 he contracted
4 the tragedy altered his

a) state of consciousness = It made him insane
b) learning = He discovered better ways of learning
c) lung cancer = He developed serious disease
d) the stage for originality = It can make person more creative

2 Choose the correct meaning, a or b, of the words on the left.

1 inspiration	a)	the process of having one's mind stimulated
2 creativity	b)	ability to produce things in imaginative way
1 stimulant	a)	a thing that helps
2 aid	b)	sth that gives more energy
1 fasting	a)	eating little or no food for a period of time, esp. for religious reasons
2 hunger	b)	the state of not having enough to eat

3 Making sentences stronger
Adverbs and verbs that go together
1 Certain intensifying adverbs and verbs often go together. Sometimes there is a logical link. Which verbs in <u>A</u> can go with an adverbs in <u>B</u>?

A			B	
agree	forget		badly	convincingly
advise	lie	understand	distinctly	fully
behave	recommend		sincerely	strongly
believe	remember		totally	tragically
consider	die		seriously	

2 <u>Underline</u> the correct adverb.

a) Doctors *strongly/seriously* advised him to give up smoking.
b) Mozart t*ragically/seriously* died when he was still quite young.
c) I *absolutely/ strongly* adore coffee and chocolate.
d) I *totally/fully* forgot my mother's birthday.
e) He lied so *convincingly/sincerely* that I *totally/strongly* believed him.
f) I distinctly*/fully remember packing the sun cream.*

g) I can't *distinctly/fully* understand what you mean.
h) She is *sincerely/seriously* considering giving up her job**.**

Smoking and Health

Smoking contributes to and causes many illnesses and diseases.

- **bronchitis –** smoking causes 75% of deaths from chronic bronchitis which kills over 30,000 people a year
- **emphysema** – this is a disease of the lung, affecting breathing
- **heart disease** – nicotine increases the heart rate and so wears down the heart. Smoking causes 25% of deaths from heart disease
- **cancer –** 90% of deaths from lung cancer are caused by smoking
- **other problems** – smokers are less fit than non-smokers, and are more likely to get colds, flu and other infections. Smoking can damage unborn babies, and can cause problems like blood clots and stomach ulcers.

How does Alcohol Affect the Body?

- **the heart** – it increases blood pressure and heart rate
- **the nervous system** – it acts as a depressant
- **the liver –** it passes through the liver and in large amounts causes diseases of the liver
- **the stomach** – small amounts help digestion; large amounts cause vomiting
- **the skin** – it makes you feel warm but really your body is loosing heat
- **the brain** – it affects the way you speak, act and think

Read the statistics

1 In order, write down which of the following you find the most frightening.

a On average, each cigarette takes 5 minutes of your life
b An average smoker loses about five years of their life.
c Only 6% of people diagnosed as having lung cancer survive.
d Cigarette smoking kills. On average, it kills 1,000 people prematurely a week.
e 25% of heart attacks are caused by smoking

2 Write one word in each space.

smoking- related		abuse	cause	accidents
	insignificant		death	

Smoking is the largest single preventable _____ of death in Europe today. In Britain it kills more people each year than road traffic _____, heroin _____ or dangerous sports. It accounts for one in three of all _____ between 40 and 64. About 90% of lung cancers and 20% of coronary heart disease deaths are _____. Non- smokers run a 'small but not _____' risk of lung cancer from passive smoking.

3 Cigarette Advertising.
People in cigarette advertisements usually look healthy. These advertisements help to attract consumers.
1 Find three cigarette advertisements in magazines.
2 For each advertisements describe what in your opinion can attract people?
3 How can you change each advertisements to tell about the dangers of smoking.

4 Put the following paragraphs in the right order.

A So far, not a very remarkable life. But then, Cunningham had an idea one night in a bar in LA. 'Let's market a cigarette called *Death*', he said to a business partner. 'Why?' said a partner

B However, *Death* cigarettes are for the smoker who wants to say, 'Yes, I'm killing myself, but at least I know it, and I smoke a brand which doesn't try to hide the fact.. '*Death* cigarettes,'' concludes B J, 'say, 'Don't you dare tell me to stop!''

C There's an Englishman called BJ Cunningham who has been smoking since he was eleven. He's a chain smoker who's in love with smoking. He smokes between two and three packets a day, and already, at the age of 30, has a weak chest. He was in hospital for six weeks when his lungs collapsed. 'It was at this point that I did actually give up cigarettes for six months'. But then he returned to his true love.

D 'It's obvious' he explains. 'When you take a packet of cigarettes out of your pocket and put it on the bar in front of you, you are making a statement about yourself, exactly as you do with the clothes you wear, the music and the newspapers you read. You're saying, 'This cigarettes are a part of me.''

LISTENING

Before you listen think about the following:
When and where do people generally drink?
What is the most common alcoholic beverage in your country?
When do you think it is acceptable to drink?

a) during celebrations
b) after work
c) after stress

T. 3 Listen to the news report and answer the following questions.

What is the talk mainly about?

Why do people drink?

What is a happy hour?

What is "social drinking"?

What are the results of alcohol abuse?

What is "binge- drinking"

Which measures can be taken to reduce alcohol abuse?

Where are the highest alcohol linked deaths?

Listen again and fill in the gaps.

Many people _____ enjoy alcoholic drink, such as wine or beer, during dinner. Sometimes people raise a glass of alcohol _____ or a birthday. And having drinks after work with friends and co-workers is called "happy hour". All these situations are considered "social drinking" because they happen _____. But

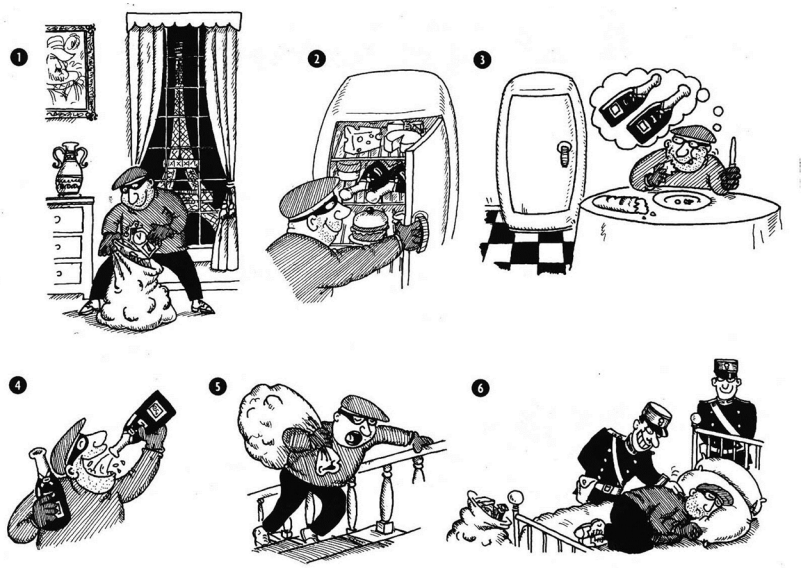
when does “social drinking” become _____? According to The WHO alcohol abuse kills 3.3 million people each year. The report also says alcohol use can _____of developing more than 200 diseases, including some cancers. And, it says alcohol abuse can put the people at greater risk of _____. Shekhar Saxena is a WHO official. She says the organization is concerned about drinking among people _____. She says it is more concerned about what is called “binge- drinking”, an extended period of heavy drinking. She says research found that _____ of drinkers over the age of 15 are binge-drinkers. The WHO report also found that the highest rates of _____ deaths are in Europe. Finally the report says less alcohol is used in Africa than in Europe. But, it says the health effects are worse in Africa because of a lack of social support systems and health care. The WHO says countries can protect people from alcohol abuse. Possible measures include raising alcohol taxes and the legal drinking age. Controlling the marketing of alcoholic drinks could also reduce _____.

• Writing

1 Note- taking and report writing

*1 **Conduct a survey to find out the number of smokers among your class-mates and their relatives.***
*2 **Use your own knowledge and the information from the text to make notes about reasons of smoking and its results.***
*3 **Try to write a brief report from your notes.***

2 Look at the cartoon story and write what happened to the burglar who could not help drinking, using information for each picture.



1. On the evening of 1 June, a French burglar broke into a house in Paris. He ... living room and ...
2. ...kitchen to ... . He opened .... cheese and ... .
3 ...hungry, so .... . Then ....two bottles of champagne
4 ...thirsty, so ... .
5 ...upstairs, but .... tired... .
6 ... asleep .... the next morning... .

- **Vocabulary**

Advice through Rhymes

1 A hangover cure

Last evening you were drinking deep
So now your head aches. Go to sleep;
Take some boiled cabbage when you wake;
And that's the end of your headache.
Alexis (c.350 BC)

2 Vegetables and fruit for health....

An apple a day
Keeps the doctor away.

If you an iron tonic need
Eat more spinach, beet and swede

If your nerves are all awry
Lettuces and onions try.

3 Eating peas...

I eat my peas with honey,
I've done it all my life.
They do taste kind of funny,
But it keeps them on the knife.

...and celery

Celery raw
Develops the jaw
But celery, stewed,
Is more quickly chewed.

...With tomato ketchup

If you do not shake the bottle,
None will come and then a lot'll.

Try to make sketches using the proverbs.

CASE STUDY

Dugs, alcohol and tobacco

Introduction

You may have heard news stories about kids that were arrested for using or selling drugs, or you may have heard of the negative effects that drinking alcohol or smoking has on teenagers (and adults, too). It is your responsibility to know the reasons why you should live a drug- and alcohol-free lifestyle, as well as learn ways to handle peer pressure when it comes to smoking, doing drugs, or drinking. This Case study activity will provide you with information that will help you know why you should say "no" to drugs, alcohol, and cigarettes.

Task

You and your group will be researching one of five topics: cigarettes, illegal drugs, over-the-counter and prescription drugs, alcohol, or peer pressure.

As you do your research, you will need to think of how you can present your information on a brochure to make it interesting and appealing for other students.

It is your goal to make a brochure that promotes a drug- and alcohol-free lifestyle by either giving the facts about the negative effects of using drugs, alcohol, or cigarettes, or by showing ways that you can overcome negative peer pressure (depending on your group's assigned topic).

Process

Look below for the topic that your group will be researching**.**

Once you have gathered all of your information, you will design a flyer or brochure in Pages that includes the information you have

discovered. You will also need to create 3 or more hand-drawn pictures on your flyer or brochure, so be thinking about what you would like to include.

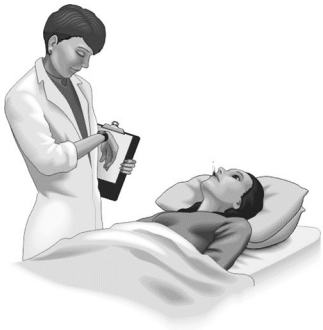
Alcohol, Cigarettes, Illegal drugs
Over -the -counter and prescription drugs
Peer pressure
Example Brochure Pages:

1st Page of the Text You need to write the first part of your information on this page. It will be the first page someone sees when they open your brochure. You need to write a minimum of five sentences on this page. If you write more, that's great!	**A hand -drawn or student-created picture or two go here**	**TOPIC HERE** **A hand -drawn or student-created picture or two go here.**
A hand -drawn or student-created picture or two go here	**Sources** The list of websites you used to get your information	**BROSHURE CREATED BY YOUR NAME(S)**

A hand -drawn or student-created picture or two go here.	**A Great Heading About the Topic** **Next Page of the Text** You need to write the next paragraph of information here. It will need to be at least 5 sentences long to have it count as a paragraph **Next Page of the Text** You can make one of your paragraphs a bulleted list a chart or a graph, if you wish.
2nd Page of the Text You need to write the second paragraph of information here. It will need to be at least 5 sentences long to have it count as a paragraph	**Final Page of the Text** You need to write a concluding paragraph here. It will need to summarize all the information you found.

Unit 4

Diseases and their prevention.



- **Reading and Speaking**
  ***Pre- reading task*.**

1 Read and study the phrases.

THE FIVE ACHES

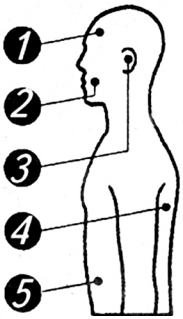
HEADACHE

TOOTHACHE

EARACHE

BACKACHE

STOMACHACHE



What's the matter? *My* *foot / knee / arm* *hurts.*

or

I've hurt my *foot. / knee. / arm*

2 Match the following symptoms with the correct diagnosis.

Symptoms

a) I've been sick quite a lot. I can't keep anything down. I feel terrible.
b) I feel weak and dizzy. I've got aches and pains all over my body. I can't stop shivering.
c) I can't swallow and my glands are swollen.
d) I started having a cold a few days ago, and now I've got a rash with small red spots all over my body

Diagnosis

Influenza	Food poisoning
Tonsillitis	Measles

3 Why would you be given the following to help make you better? What do you do with it?

Example

a plaster

It keeps the wound clean, so it heals more quickly.

You put a plaster on a cut or graze.

- a course of antibiotics	- a bandage
- a pain killer	- antiseptic cream
- antihistamine	- cough medicine
- a crutch	- sleeping tablets

1 Work alone.

You are ill. Write down your symptoms. When you are ready, read out your symptoms to the rest of the class. They are doctors, and must make a diagnosis and suggest treatment.

Now read the text and decide which are the main causes of diseases.

Diseases and their causes

Microbes are present everywhere in air, soil, and water, as well as on you and in your food. Most microbes are harmless, but some of them cause diseases.

Your body has natural defenses against disease. The natural defenses are our tissues, organs, and systems that fight and resist infection. For example, unbroken skin prevents the entrance of microbes into the body. Mucus in the nose and throat also helps keep microbes out of our body. The nasal passages and trachea are lined with cilia. Cilia filter microbes and keep them out of the lungs. Stomach acid kills many microbes brought into the body in food. All these are primary defenses because they prevent microbes from entering into the body.

Diseases can also be caused by chemicals or heredity. Some diseases, such as chicken pox and the flu, pass from one person to another. However, not all health problems are passed from person to person. When your body does not function correctly, you have a health problem. Health problems can be caused by disease, poor diet, or accident. A disease is any condition that interferes with the normal body functions. Microbes such as viruses, bacteria or fungi can cause diseases. Chicken pox and strep throat are just two of many diseases caused by microbes. Some health problems such as hemophilia are inherited. If your diet lacks one or more nutrients, your body doesn't function well. When you do not eat the right foods, your body is not healthy. Accidents cause many health problems. Most injuries are the result of accidents in the home. Many injuries are also caused by sports and traffic accidents.

Many diseases last only a few days. A person soon recovers and becomes well again. Other diseases, such as malaria, AIDS, and cancer, may last a long time, cause permanent damage, or result in death.

Comprehension check.

Is a) b) or c) correct in each statement below?

1. Article points out that...
   a) Microbes surround us everywhere.

b) All microbes are harmful.
c) We shouldn't be afraid of microbes.

2. Natural defenses of our body...
a) kill all the microbes
b) are unable to fight the infection.
c) prevent microbes from entering into our body.

3. According to the text the causes of diseases are...
a) chemicals and heredity.
b) viruses
c) different factors like infections, heredity, poor diet accidents etc.

- **Vocabulary**
  1 Match each health problem with its cause.

a) hemophilia	1) chemicals
b) chicken pox	2) virus
c) AIDS	3) genetic heredity
d) malaria	4) injury
e) swollen ankle	5) microbes
f) industrial poisoning	6) insect bite

2 Complete each sentence with a noun formed from a verb on the left.

a)	resist	1) This drug increases body's natural _____ to infection.
b)	prevent	2) _____ is better than cure.
c)	defend	3) Antibodies are the body's _____ against infection.
d)	enter	4) His sudden _____ took everyone by surprise.
e)	interfere	5) I don't want any _____ from you!
f)	injure	6) Children playing with this machine risk serious _____

Read the text. What do you do now to avoid diseases in future?

Disease prevention

There are two main kinds of diseases. A communicable disease is an illness caused by a pathogen that enters the body. A non-communicable disease is an illness that is not caused by a pathogen.

The most common communicable disease is the cold. To avoid catching a cold, the most important thing is to avoid contact with a person especially during the first 24 hours.

It is important to realize that there is no medical cure for the common cold. However if you follow good health habits, you can make your body stronger and fight pathogens more easily.

Two of the major non-communicable diseases that affect many people are heart disease and cancer. Heart disease can often be traced to poor health practices that began at a young age. The risk of getting heart disease can be reduced by choosing not to smoke, exercising daily, avoiding fatty foods, maintaining a desirable weight, and learning ways to deal with stress.

Cancer is the other major non-communicable disease. Cancer is a disease in which abnormal cells grow throughout the body and destroy healthy cells.

There are many kinds of cancer. Medical researches believe that the risk of getting cancer can also be decreased. Thus, you can avoid skin cancer by avoiding the sun's rays when they are the strongest. Health authorities agree that almost all cases of lung cancer could be avoided if people did not smoke. There is also evidence to indicate that eating healthful foods will help reduce the chances of cancer of the digestive system.

Answer the questions:

1 What are the main kinds of diseases?

2 How to avoid catching a communicable disease?

3 How to reduce the risk of heart disease and cancer?

1 Complete each sentence with the correct word from the box.

blood pressure	fever	life expectancy	symptom
mucous membranes		diagnosis	

1 Your _____ is how long you can expect to live.
2 A _____ is the process of identifying a disease or disorder from symptoms.
3 A _____ is an increase in your body temperature that is not normal.
4 Our nose has a protective lining called _____.
5 _____ moves blood through blood vessels.
6 A _____ is a change in a bodily function that indicates a possible problem.

2 Here are two newspaper articles, but they have been mixed up. Look at the headlines and read the paragraphs to decide which paragraph go with which story. Then put them in the right order.

Phobias
1_____ 2_____ 3_____ 4_____ 5_____

Holistic medicine
1_____ 2_____ 3_____ 4_____ 5_____

a Holistic means 'whole'. In terms of health care, it means looking at the whole body, the whole person when it comes to treating them

f ***There is a move*** in medicine which is becoming more and more popular, a move away from Western attitudes to medicine towards what is known as the holistic approach.

b Many of us are affected by these fears, though reactions vary from a minor feeling of discomfort which is easy to cope with, to an absolutely crippling fear which can destroy a person's life.

c Modern medicine treats patients as a series of parts that are all isolated. It looks at the part which is not working and tries to remove the symptoms. The opposite of holistic is symptomatic. Too often, modern medicine treats the symptoms and not the cause of an illness.

d ***Did you*** know that about fifty percent of the population of Britain say they couldn't touch a snake? And that another twenty per cent say they could, but not without feeling scared? Fear of snakes is one of the most common phobias.

g There is not a great range of things we are frightened of. Most are to do with open spaces, confined spaces, insects such as spiders, situations where there are a lot of people or too few people.

h The typical reactions of people when they begin to feel afraid are increased heartbeat, quick breathing. Patients break out in a cold sweat and they say they have shivers down their spine.

i The holistic approach takes into account not only the symptoms, but also the age, habits, emotions and life- style of the individual, and tries to build an overall picture. Being healthy means there is a balance between your mind and your body. When you are ill, it is because there is an imbalance somewhere and this imbalance is shown by symptoms.

e Holistic medicine tries to prevent illness, and it is known that prevention is better than cure. A good diet, with lots of fresh food, not processed food with its preservatives and chemicals, is essential; a healthy life- style, without too much pressure and worry, and lots of exercise and rest, not too much, not too little - these are the things that will prevent the illness.

j Such people are helped by so called 'graded exposure'. Many fears are born of ignorance. People say they couldn't bear to touch a snake because its skin is slimy, which is not true. Knowledge can help to break down a phobia to a certain extend. Then a person is gradually let become more familiar with the object of his or her fear, and then doctors try to accustom him to the realities behind the phobia.

Suffixes and prefixes

1 Work in pairs. Use a dictionary to help.

Make new words with the base words, using the suffixes and /or prefixes. Sometimes you need to make small changes to the spelling.

PREFIX	BASE WORD	SUFFIX
	conscious	-able/ible
in-	help	
	kind	-ful
un-	literate	
	loyal	-(t)ive
im-	mature	
	polite	-less
il-	popular	
	relevant	-cy
ir-	rely	
	respect	-(i)ty
dis-	sense	
	thought	-ment
mis-	understand	
	use	-ness

2 Share ideas with the whole class. How many new words did you make altogether?

From which base word did you make the most new words?

LISTENING

Cosmetic surgery
Before you listen, think of some common plastic surgery types?

What makes people undergo plastic surgery?

What is the most popular cosmetic surgery in the world/your country?

Do you think you would ever consider plastic surgery?

Do you know any celebrity that had a cosmetic surgery?

T.4 Listen to the passage. Do your own answers correspond to the points mentioned in the talk?

Listen again and fill in the gaps.

Would _____change your face and body? Would you like movie star looks? A lot of people _____ this. They _____ money to go to a cosmetic surgeon and change their appearance. The most common operation we call _____ People who are unhappy with their nose have it reshaped. Other people want _____ to disappear to make themselves look younger. People also go _____ and have things made bigger or smaller. I think this is a _____. I'm not the best-looking person _____ but I would never consider plastic surgery - _____was free. Some people have so many operations they end up looking like they're made of plastic. I'd _____ looking human.

SYNONYM MATCH: Match the following synonyms from the listening passage:

a. movie star	operation
b. surgery	enlarge
c. look	reduce
d. reshape	remodel
e make bigger	appearance
f. make smaller	celebrity

- **Writing**

1 Writing a Summary

Marking the text is one way of summarizing.
Look at the example.

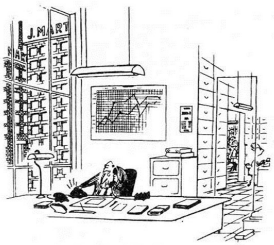
Microbes are present **everywhere** in air, soil, and water, as well as on you and in your food. Most microbes are harmless, but some of them cause diseases.

Your **body has** natural **defenses** against disease. The natural defenses are **our tissues, organs**, and systems that **fight and resist infection.** For example, **unbroken skin** prevents the entrance of microbes into the body. **Mucus in the nose and throat** also helps keep microbes out of our body. The nasal passages and trachea are lined with **cilia**. Cilia filter microbes and keep them out of the lungs. **Stomach acid** kills many microbes brought into the body in food. All these **are primary defenses** because they prevent microbes from entering into the body.

Do the same for the rest of the text '*Diseases and their causes'****.***
Underline or mark the main ideas only.

When you have finished, compare yours with another student's.

***2* Look at the picture and the words, and write the story about the workaholic.**



1 under a lot of pressure
company's profits down

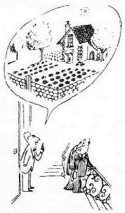
2 working sixteen hours a day
not getting home until ...
wife and children

3 listened attentively

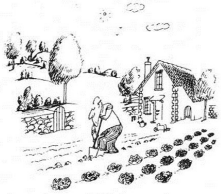
4 advised him to give up
work for a while

5 get some fresh air
forget about ...

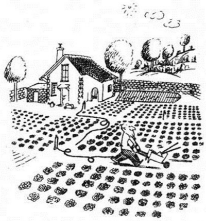
6 suggested that he started ...
the exercise would do him good



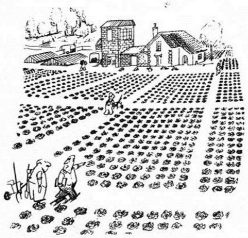
7 As Henry was leaving, ...



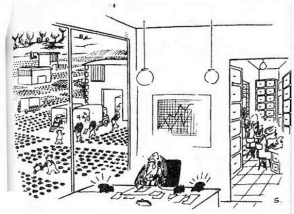
8 followed his doctor's advice. bought ...
As soon as ..., he started ...
spent his days ...



9 ... enjoyed ... very much
bought ... built



10 expanded employ workmen



11 business had grown so much that ...

Case study

Communicable Diseases /Non -communicable Diseases

Introduction

What are communicable and non -communicable diseases?

List five examples of communicable and non -communicable diseases

In the diagram below, describe the similarities and differences between the two types of diseases.

Communicable Diseases Only	Non-communicable Diseases Only

How do communicable diseases affect the world?

Looking at the leading causes of death in low and high-income countries, which causes would be classified as communicable, or infectious, diseases?

When you look at deaths from communicable diseases, what differences exist between low and high-income countries?

What do you think are the reasons for these differences?

What are some examples of health resources that Peace Corps Volunteers help their communities to access?

How do non -communicable diseases affect the world?

Which risk factors for non- communicable disease are most prevalent in your community?

What do you think are the most effective ways to reduce these risks?

What are some examples of ways Peace Corps Volunteers work with their communities to reduce risk factors for non- communicable diseases?

Task

Research a communicable or non-communicable disease

State the name of the disease you will research:

Is it communicable or non communicable?

As you conduct your research, fill in detailed information to answer the questions below.

Where in the world is the disease prevalent?

What groups of people typically experience the disease? (e.g., children, people with high cholesterol, people without access to clean water, etc.)

What are the physical symptoms of the disease?

How could the disease interfere with a person's daily life? (e.g., school, work, chores, community involvement, etc.)

How is the disease treated? Is it curable?

How could the disease be prevented? How do health issues affect people's lives?

Process

Using the information you collected about one disease, imagine the challenges facing a person living with the condition you researched. You will write a series of three fictional, but realistic, journal entries from the perspective of a person who has experienced the disease. Your journal will include the entries described below.

Introduction: Who are you? How old are you? Where in the world do you live?

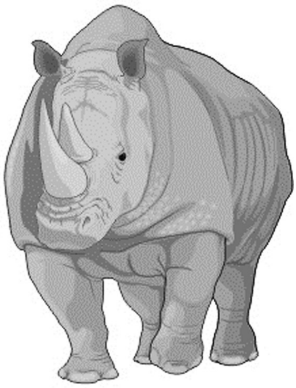
Journal entry 1: How were you diagnosed? What were your symptoms? What medical treatments have you received?

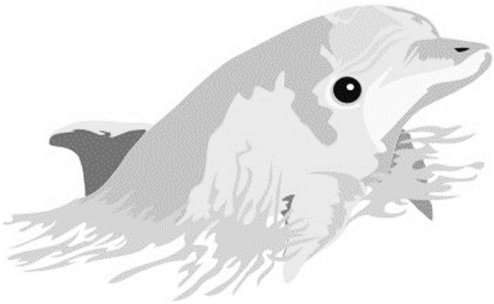
Journal entry 2: How has the disease affected you, your family, and your daily life?

Journal entry 3: What should individuals and communities do to prevent the disease

Unit 5

Animals in danger.





- ***Speaking and Reading***
  Pre- reading task.
  1 Study the phrases below which are used to express Belief and Opinion.

Phrases for expressing *Opinion:*

In my view / in my opinion / to my mind /If you ask me, we haven't made any progress.(fairly informal)
From an author's **point of view,** the situation is rather serious.

Phrases for expressing *Belief:*

I'm **convinced** we've met before. (very strong feeling that you are right)

I've always **held / maintained** that watching TV is a waste of time. (used for very firm beliefs)

I feel they shouldn't do that. (strong personal opinion)

I **doubt** we'll ever see total world peace. (don't believe)

I s**uspect** a lot of people never even think about environment. (have a strong feeling about something negative)

2 Work with a partner. Express your opinion on the following problems.

1 How would you feel about wearing a pullover made from dog's hair?
2 Should we wear leather, fur, wool and other animal-based fabrics when synthetic alternatives are available?
3 Should animals be used as laboratory tools?

3 For discussion. The facts below raise many important moral issues about the way humans treat animals.

a) Humans have much in common with other animals, for instance, they share the capacity to suffer and feel pain with all vertebrates including fish.
b) Humans use animals for work, e.g. working dogs on farms, guide dogs for the blind etc.
c) More than one million animals are kept in 5000 zoos around the world.
d) People consume around 140 tones of meat a year worldwide – about 30 kg per person
e) An estimated 200 million animals are subjected to painful experiments in laboratories around the world each year.
f) Humans hunt animals for profit and fun...100 million animals are killed world wide every year for their fur.

g) Over 1,000 animal species are under threat of extinction, thanks largely to human actions.

Divide into two groups. Group A reads the text 1 and group B reads the text 2. Then answer the questions that refer to your text, after which form pairs where one member is from group A and the other is from group B. Find out the missing information to complete the answers.

1. How has people's thoughtless activity affected the future of wild animals?
2. Is there anything unusual about rhino's way of life?
3. Why are strandings of dolphins and whales becoming more and more common?
4. Why do poachers kill rhinos?
5. What are the main reasons of strandings?
6. How often do human rescuers succeed in refloating stranded animals?
7. How many rhinos have survived the hunt?
8. Express your own opinion about the future of wild animals.

Text A

Why it is in danger?

Animals in danger – What have we done? What we can do?

In recent years people have threatened the future of many animals. Life has become difficult or impossible for many species. Wild animals cannot compete with people for land – the animals always lose.

What have we done?

- We have cut down forests and made farms: fewer trees mean fewer animals.
- We have hunted animals for their skin and horns.
- We have built roads and towns in places where wild animals used to live.
- We have polluted the environment.

Maybe it isn't too late. But we have to do something now. Tomorrow will be too late.

The White Rhino.

Since 1975, the number of rhinos has gone down by 85 per cent. The largest kind of rhino is the white rhinoceros, which lives in Africa. Rhinos eat grass and they have wide square mouths, like cows. They live in groups of five to ten, called herds. After the baby rhino, called a calf, is born, it stays with its mother for approximately four years.

Rhinos are big. They are 160- 185 cm tall and 370- 405 cm long. They weigh up to 2722 kilos! An unusual thing about the rhino is that it can turn its ears to hear sounds from any direction.

The rhino's horn is made of something called keratin, which people have in their hair and fingernails. Poachers kill the rhinos for their horns. A rhino horn can be sold for as much as $ 40,000. Poachers have hunted and killed thousands of white rhinos, but 5.000 still live in wildlife reserves in South Africa.

Text B

Strandings.

All over the world, strandings of dolphins and whales are becoming more common and environmentalists claim that this may be nature ringing the alarm bells, believing it is the sea itself which is enduring a slow death brought about by pollution. Dolphins dying off America and in the Mediterranean were nearly all infected with a virus, but they were also carrying a heavy pollution burden, which had suppressed their immune systems.

Individual strandings are mainly the result of illness or injury. The animals cannot either navigate or swim properly and accidentally come ashore. It is even possible that they may choose to strand themselves as a response to their condition. In the Southern Hemisphere, mass strandings of these animals are common and mostly happen when animals are in a large group and their leader becomes disoriented and swims ashore, while the others then all follow him.

One piece of good news is that in some cases human rescuers succeed in refloating stranded whales. In New Zealand, where most stranded whales are fit and merely lost, up to ninety per cent survive. One signal, at least, that all may not be wrong with sea.

Comprehension check
Explain the phrases in bold.

In recent years **people have threatened the future** of many animals.
...this may be nature **ringing alarm bells**.
...the sea itself which is **enduring a slow death**...
...they were also **carrying a heavy pollution burden**...
...they may choose to strand themselves **as a response to their condition**

- **Vocabulary**

1 Complete the gaps with a noun formed from each verb.

threaten	respond	succeed	believe
survive	pollute	choose	die

1. One mistake made by a surgeon could mean _____of the patient.
2. The incident has shaken people's _____ in the police.
3. We are faced with a difficult _____.
4. The accident caused the _____ of a number of beaches with oil.
5. I received an encouraging _____ to my letter of application.
6. Their final attempt to refloat the stranded whale was a _____.
7. The continuing existence of the animals and plants which are best adapted to the surroundings is called the _____ of the fittest.
8. This country is under the constant _____ of flooding.

2 All the missing words are taken from the texts about animals above. Find them and fill in the gaps.

1. If you *threaten* someone or something you are likely to harm them.
2. 'How many different kinds of animals are there in the world?'
3. 'There must be hundreds of thousands of _____ '
4. A _____ is a place where we grow food or keep animals.
5. My _____ is the outside of my body.
6. White rhinos live in _____ .They eat _____ and live in small groups called _____. A baby rhino is called a _____ and lives with its mother for four years. _____ kill rhinos for their _____.

7. Environmentalists believe that _____ of dolphins and whales are becoming more and more common, due to the fact that sea itself is _____ a slow death.
8. Most of the sea animals in this region were carrying a heavy pollution _____ brought about by industrial waste.

3 Read the text and when you come to the boxes choose the sentence that best continues the text.

In many cases animals are superior to us

They live mostly in wild reserves.

They can do things, that we can't

We cannot use our noses with the sensitive skill of a dog, we cannot run with the speed and beauty of the horse, and no way can we fly like those wonderful birds.

We buy expensive clothes to look more fashionable and beautiful

We admire their splendid attributes, we wear their feathers and their skins because they are so beautiful

Indeed, many animals are beautifully colored, though they do not produce their colors to please us.

Other animals are very dangerous.

Their colors enable them to survive.

Perhaps the best known use of color is found in those animals whose pattern and coloring make them difficult to see against their background.

This blending of color is known as camouflage.

Camouflage is the best known use of color.

Some animals use camouflage to escape from more powerful hunters which would eat them, but in other cases it is the hunter which uses camouflage to enable it to approach its victims without being seen.

LISTENING

Before you listen spend one minute writing down all of the different words you associate with the word "animal". Share your words with your partner(s) and talk about them. Together, put the words into different categories.

T.5 Listen to the passage

In pairs / groups, talk about these opinions. Do you agree or disagree with them?

a. Trading of animals is not different from farming and killing animals.
b. There is little difference between using leather from cows and snake skin.
c. It's OK to use exotic animals in traditional Chinese medicine.
d. Businessmen want big profits, so many animals will struggle for survival.
e. People caught selling endangered species should get 30 years in prison.
f. People will never stop buying fur coats or ivory bracelets.
g. The best answer is to breed the animals and legalize the sale of their products.
h. A tiger skin coat looks absolutely beautiful.

Quick debate: Students A think poachers and traders of exotic species should go to prison for life. Students B think poachers and traders of exotic species should receive heavy fines

Listen again and delete the incorrect word from the pairs in *italics*.

Internet trade threatens exotic animals

The world's *endangered / dangerous* species are in danger from the Internet. Online *shoppers / shippers* are buying huge numbers of exotic animals. This is another nail in the *heart / coffin* for many creatures already threatened with *distinction / extinction*. Poachers, collectors wanting stuffed rhino heads and Chinese medicine already *treat / threaten* thousands of species. The International Fund for Animal Welfare (IFAW) wrote a report called "Caught In The Web - Wildlife Trade On The Internet". It found thousands of *raw / rare* animals for sale in its one-week Web search.

The report is the *tip / top* of the iceberg. Experts value / worth the illegal global animal trade at billions of dollars a year. The World Wide Web makes the situation *worse / worry*. "Trade on the Internet is easy, cheap and anonymous. The result is a cyber black market where the future of the world's *barest / rarest* animals is being traded away," said IFAW's Phyllis Campbell-McRae. She also warned: "Trade in wildlife is *piloted / driven* by consumer demand / supply, so when the buying stops, the killing will too. Buying wildlife online is as damaging as killing it yourself."

SYNONYM MATCH: Match the following synonyms from the article:

a.	endangered	setback
b.	huge	cautioned
c.	nail in the coffin	discovered
d.	creatures	top
e.	found	massive
f.	illegal	secretive
g.	tip	illicit
h.	anonymous	threatened
i.	warned	harmful
j.	damaging	animals

Animal idioms

1 The list of idioms below all contains the names of animals. Look at the cartoons and write in the name of the animals.

a to smell a _____

f to talk untul the _____ come home

b to set the _____ amongst the _____

g to be gentle as a _____

c to behave like a _____ in a china shop

h to be unable to say boo to a _____

d to sort out the _____ from the _____

i to have a _____ party

e to make an _____ of yourself

j to be like water off a _____ 's back

2 Read the situations and complete the idiom from above which describes it.

a I hadn't seen my old school friends for ages, so we stayed up talking for most of the night. We talked .....
.....

b The test was very difficult. It showed the teacher which students had done the work and which students hadn't. It really sorted out .....

c My brother's getting married on Saturday and he's going out with all his mates the evening before. He's having a .....
.....

d Our dog's very big and fierce- looking but he's very good with babies and children. He's as .....
.....

e I didn't believe a word that salesman said about that car. I knew he was lying about the number of miles it had done. I really .....
.....

f It doesn't matter how much you get angry with her, it has no effect.
It's like .....
.....

g The interview was terrible. I forgot everything I wanted to say, and I couldn't answer their question either. I really made .....
.....

h Careful! You're so clumsy. You're knocking everything off the table. You're like .....
.....

i I didn't know that Bob knew nothing about Anna and Peter. When I told him he went white. I think I've really set .....
.....

j Mary is such a shy little girl; she never puts her hand up, she can't say .....

- **Writing**

Write an article of at least 300 words discussing the way the humans treat animals and the results it could bring.

Case study

Endangered animals

Introduction

The earth's ecosystem is in a crisis. Human activities are threatening plant and wildlife at alarming rates. Scientists believe species are becoming extinct at the rate of 1 every 15 minutes...100 each day...4,000-6,000 each year. Some estimates indicate that as much as one fifth of all the species on earth today will have vanished by the end of the century.

After specializing your research on one endangered animal, you will give a PowerPoint presentation for the Endangered Animal Foundation to raise donations to help preserve endangered animals.

Task

The Endangered Animal Foundation needs contributions to continue its efforts to save endangered animals around the world. As an Endangered Animal Specialist (EAS), you have been hired to give PowerPoint presentations as well as hand out pamphlets to encourage donations to the Endangered Animal Foundation.

Process

1. Begin with the background information.
This will help with your research for your persuasive presentation.
2. With a partner select an endangered animal from the list
3. Partners will evenly divide the six topics listed and research information about each animal.

The topics listed in your data folder are:

- description
- habitat
- food web

- adaptations
- reasons for endangerment
- other important information

4. Working together partners will record information gathered on their data sheets.

5. When all topics have been researched partners will prepare a PowerPoint presentation. In this presentation partners will give expert and persuasive information about their animal from the six topics researched.

The presentation shall consist of:

6-12 slides

4-8 pictures and/or multimedia clips

6. All group members will participate in the PowerPoint presentation given to the class.

Each student must choose one ocean animal from the given list.

Ocean Animal Choices:

Barracuda
Blue Whale
Clown Anemone Fish
Coral
Emperor Penguin
Great White Shark
Hammerhead Shark
Harbor Seal
Killer Whale
Krill
Lobster
Manatee
Manta Ray
Moray Eel
Octopus
Portuguese Man-of-War
Puffer Fish
Sand Dollar
Seagull

Seahorse
Sea Otter
Sea Sponge
Sea Turtle
Sea Urchin
Shrimp
Swordfish
Walrus
Bluefin Tuna

You will research that animal's:

- scientific name
- length
- weight
- habitat
- migration habits
- diet
- if it is poisonous
- enemies
- life span
- mammal or fish
- how it breathes
- special body features (blowholes, echolocation, etc.)
- what males, females, and babies are called
- group travel
- how it moves through the water
- reproduction

Each of these categories will be written about in your report.

You will also find one color picture of your ocean animal to put on your poster.

As an Endangered Animal Specialist, you will research an endangered animal and present its description, habitat, food web, adaptations, reasons for endangerment, and other critical information to convince groups and individuals to do their part to preserve the unique animal species we have on the earth today.

Unit 6

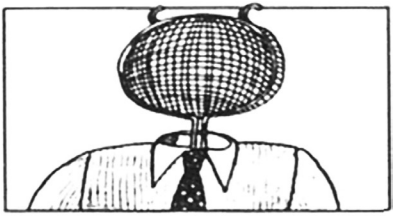
Memory

- **Speaking and reading**

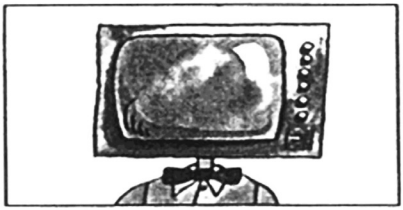
  Pre- reading task.

  1 Study the following proverbs

'It's on the tip of my tongue.'



'My head's like a sieve.'



'My mind's gone blank.'

'In one ear and out the other.'

2 What do these expressions mean?
Do you have expressions like that in your own language?

3 Find someone who....

As you do this exercise, walk round the class and talk to as many people as possible. When you find someone who... write his/her name in the 'names' column below. Find as many different names as possible.

Find someone who can recall.....	**Names**
1 what they had for dinner last night	.....
2 what they were wearing last Tuesday	.....
3 the year Christopher Columbus discovered America	.....
4 the names of all the students in the class	.....
5 what they dreamt about last night	
6 what 'my head like a sieve' means	.....
7 the smell of onions	.....
8 an occasion when they hurt their foot	.....
9 where they were on January 1st	.....

4 Discuss how you recalled different things in exercise 2.

Read the text and try to write a definition of 'memory'.

The psychology of memory.

Memory is undoubtedly one of the most important human faculties. Without it there would be no learning from experience, no intellectual functioning, no development of language, nor any of the qualities that are generally associated with being human. Yet, with the possible exception of consciousness itself, memory remains the most mysterious of the mind's faculties. Despite the fact that more research has been devoted to the study of memory than to any other mental function, comparatively little is known about how the mind remembers things, and why it also appears to forget.

Memory is often thought of as the ability to recall past events. If someone was asked to remember what he ate for lunch yesterday, he would probably be able to give a brief description. Memory, however, is more than just ability to recall. If the same person were asked what he ate for lunch a year ago, he would be very unlikely to recall it. Yet if we could remind him of what he actually ate, he might well say, 'Ah yes, now I remember.' He would recognize the items and could still be said to have retained some memory of the event. Thus retention

doesn't necessarily imply recall.

If, after reminding him of an event or situation, he still failed to recognize it, it wouldn't necessarily mean that he had no memory of it. It might well happen that under hypnosis he would be able to recall details of the meal perfectly. There may be many events and experiences that are recorded in memory but that cannot immediately be recalled and recognized. Indeed, there is growing evidence that the brain may record everything that is ever experienced.

Comprehension check.
Are these statements correct? Write T (true) if the statement is correct and F (false) if it is not. Correct the false ones.

1) Memory is the quality that makes people different from animals.
2) Scientists have examined all aspects of memory.
3) Memory is person's power to remember something that he has seen, done or experienced previously.
4) We can't remember absolutely everything.
5) Reminding always leads to recall.
6) Hypnosis is one of the aids to recall past events.
7) It happens that sometimes we are unable to recall this or that detail of our past.

- **Vocabulary**

1 Choose the correct meaning a) or b) of the word on the left.

remember recall	a) bring sth/sb back into the mind b) to have or keep in the memory
memorize retain	a) to hold or contain sth b) to learn sth well enough to remember it exactly
recognize remind	a) to be able to identify sb/ sth that has been seen/ heard, etc before b) to help sb to remember sth that may have been forgotten
conscious mental	a) being aware of what is going around b) being in mind

2 Match the beginning and ending of each sentence.

1. It is the main quality that is associated...	a) ...a brief description of an incident
2 It is the fact that much research....	b) ...recognize his own son
3 It is not yet known why the brain appears....	c) ...with being human
4 It is not always easy to give....	d) ...has been devoted to the study of this problem
5 It is strange that he failed to...	e) ...evidence that we may retain any information
6 There's growing...	f) ...to remember and forget things

3 Making connections in texts

1 ***Antonyms and synonyms often occur in texts. Which are the antonyms and synonyms in these sentences.***

Despite the fact that more research has been devoted to the study of memory...
...comparatively little is known about how mind remembers things, and why it also appears to forget.
If the person were asked what he ate for lunch a year ago, he would be very unlikely to recall it, but if we could remind him of what he actually ate, he might well say, 'Ah yes, now I remember.'

2 ***For each of the adjectives or verbs in A, write its opposite in B using a prefix.***

A	B	C
kind honest credible appear pleased friendly trust professional cover	unkind	cruel

In column C, write a synonym for the words in B, choosing one of the words in the box.

unbelievable annoyed amateur deceitful vanish reveal ***cruel*** *suspect hostile*

As you read this section, look back at exercise 2 *Find someone who...*

1. Which types of memory did you use while doing this exercise?

2. Which types of memory described in this section did you not use in the exercise?

The varieties of memorable experiences.

Memory can be divided into several different types:

Episodic memory. The memory for the past episodes and events in one's life, such as tripping over the cat.

Factual memory. The memory for facts, such as that the Battle of Hastings took place in 1066, or that Einstein formulated the theory of relativity. These are not actual episodes in one's life, though they have been learned as the result of numerous little episodes at school, in reading, and at other times.

Semantic memory. The memory for meaning. We remember that a 'butterfly' is an insect with four large brightly colored wings, and that 'smooth' describes a certain tactile sensation, as well as having several other meanings. The average person remembers several hundred thousand words and meanings.

Sensory memory. Most people have a strong visual memory, being able, whether they believe it or not, to remember several thousand faces, probably seeing most of them clearly 'in mind's eye'. Many will also be able to remember the sound of favorite pieces of music, or the smell of some tasty dish.

Skills. Skills also involve memory. A person remembers how to get dressed, drive a car, or throw a ball. Even walking and speaking are skills learned early on in life.

Instinctive memory. The newborn baby 'remembers' to suck at its mother's breast, and the adult brain 'remembers' how to breath, sleep, digest, etc. The bases of many such memories are inherited and stored in the genes. This genetic memory also specifies many individual characteristics, both physical and mental.

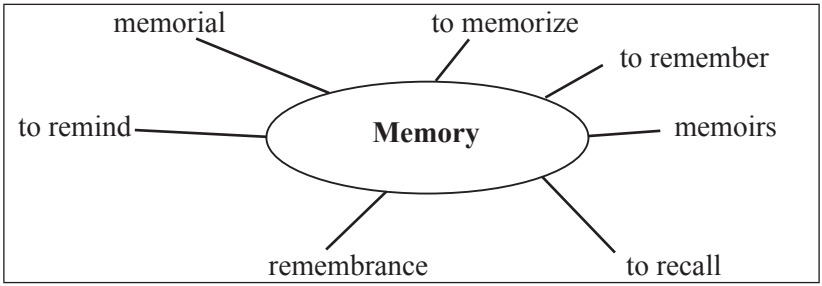
Collective memory. Psychologists such as Carl Yung have suggested that we may also have access to collective race memories. These appear, mainly in dreams, as archetypal symbols that are very similar for large numbers of people, though outside their normal experience

of life.

Past- life memory. Some people appear to be able to 'remember' events from before their birth, sometimes from many centuries before. Under hypnosis it is possible to examine this phenomenon more fully, and it is often found that the 'memories' do correlate with actual happenings in the life of an individual in the past – though the subject may have no knowledge of that individual's existence.

There is hardly a moment in our lives when memory is not playing a crucial role, and the more we understand how it functions, the more we can help ourselves at work, at home, in play, and in study, both with others and on our own.

1 Exploring 'memory'
Use a monolingual dictionary to explore the meanings of the words below. Check:
a) the pronunciation and stress
b) the meaning(s) of each word and the overlap of meaning(s) between words common collocations.



What does the prefix *re-* mean (as in *remember)*

2 Complete the table with the correct part of speech.

Verbs	Nouns	Adjectives
to retain		
to recognize		
to impede		
	episode	
	sensation	
to taste		
	fact	
to digest		
to stand out		
		genetic
		visual
	emphasis	

3 Write each word or phrase in its correct space.

recognition	mind	involve	played a crucial role	
ability	research	experience	an average of	remarkable

There is not much that can be done to change the future of your child's _____. Parents shouldn't worry too much about whether to _____ their child into a ball game or an art class. 'Geniuses are born not made.' The support of this view comes from the biology of individual differences, a specialized area of genetic _____.

Another view, on the contrary, emphasizes that exceptional _____ is the result of a close and constructive relationship in childhood. According to the study of 120 specially talented in music, art, sports, mathematics and science, it was found that none of them showed _____ talent in early life. It was perseverance that _____. Of the musicians in the study, for example, it took _____ 17 years to reach international _____. But parents should always remember that their child should _____ only support and encouragement and in no case pressure.

LISTENING

Try to answer the following questions before you listen.

What can you do or eat to look after your brain? In pairs / groups, talk about how the following might keep your brain throughout your life. Put them in order of most beneficial.

___ Eating fish
___ Sleeping eight hours a night
___ Avoiding alcohol
___ Eating animal brains
___ Sitting in the sunshine
___ Studying English
___ Massaging your temples
___ Watching television

In pairs / groups, talk what we use our brains for most at the following stages of our lives. What do we think about most?

baby child teenager thirties middle aged old person

MEMORIES: Complete the following sentences and then talk about them with your partner(s):

a. I'll never forget the time I _____.
b. I remember _____ as if it were yesterday.
c. I have many happy / wonderful memories of _____.
d. I often forget to _____.
e. _____brings back memories.
f. The greatest tragedy in living memory is _____.
g. My most unforgettable teacher is _____.
h. To remind myself to do something important, I _____.

T. 6 Listen to the passage and answer the true /false questions

a. Eating fish may make us better at passing examinations. T / F

b. Old people who eat fish regularly may remember things better T / F

c. Eating fish may keep us four years mentally younger. T / F

d. People who do not eat fish spend less time thinking T / F

e. A study looked at the eating habits of more than 6,000 old people. T / F

f. Our body fat is important for the brain's development. T / F

g. Salmon and tuna do not help the brain. T / F

h. The study appears in the latest issue of the "Fish and Brain" journal. T / F

Listen again and strike through the incorrect word in each of the pairs in bold.

Eating fish is good for the brain

Eating fish every week may keep our brain more active during our **older / bolder** years. This is the conclusion of research **conducted / constructed** by the Rush University Medical Center in Chicago. The study found that older people who **eat / catch** fish regularly have quicker and better memories. **Over / Under** a lifetime of eating fish, people could be three to four years mentally younger in age. Lead researcher Martha Clare Morris said: "We found that people who ate one fish **meal / bone** a week had a 10 percent slower annual decline in thinking. People who rarely eat fish have a faster decline in their thinking ability over **time / clock**."

Morris's team collected information on the diets and memory **gain / loss** of 6,158 people aged 65 and older. She concluded: **"Eating / Catching** fish may help to slow people's decline in thinking ability as they **old / age**." She thinks several **fatty / slim** acids contained in fish

may help the brain's development. Eating fish has previously been associated with a lower **risk / brisk** of developing Alzheimer's disease or having a stroke. Oily fish, like salmon and tuna, are a **luxury / rich** source of the acids. The report on the benefits of consuming fish appears in the October 10 online issue of the *Archives of Neurology*

SYNONYM MATCH: Match the following synonyms from the listening passage:

a.	active	gathered
b.	study	chance
c.	regularly	yearly
d.	annual	get older
e.	decline	research
f.	collected	eating
g.	age	weakening
h.	help	lively
i.	risk	aid
j.	consuming	frequently

- **Writing**
  Style of formal letters

Here is some of the language typical of business letters.

1. Opening and closing greetings

If you don't have a contact name:

Dear Sir or Madam

Yours faithfully

If you know the name of the person:

Dear Mr. Jones
Mrs.
Ms'
Yours sincerely

If you know the person as a friend or close business colleague:

Dear James

Best wishes/regards

2 Stating the reference at the beginning of the letter
You can start with either

Subject: _ _ _ _ _
or an expression like:

With reference to _ _ _ _ _
I thank you for your letter of 1 July.
Further to our telephone conversation, _ _ _ _ _

3 Requesting

I would be grateful if you could _ _ _ _ _
I would appreciate it if you could _ _ _ _ _
Could you please _ _ _ _ _? (more informal)

4 Explaining the reason for writing

I am writing to inform/apply for/request/etc. _ _ _ _ .

5 Thanking

Thank you for _ _ _ _ _
We were very pleased to _ _ _ _ _

6 Enclosing documents

Where other documents are included with the letter, you can say:
Please find enclosed/attached _ _ _ _ _

7 Apologising

I regret that _ _ _
I am afraid that _ _

8 Expressing urgency

__ _ _ _ at your earliest convenience.
_ _ _ _ _ without delay.
_ _ _ _ _ as soon as possible.

9 Confirming

I am pleased to confirm that _ _ _ _ _
I confirm that _ _ _ _ _

2. Look at the organization of a formal letter in English Is it the same in your language? Think about...
...the position and content of the two addresses and the date.
...the beginnings and endings of letters.

3. Choose the words that are more formal or appropriate in the letter. What makes a letter more or less formal?

Reservations Manager
Carlton Hotel
78, Park Lane
Bristol
BH12 3 GR

Dear Jack / Sir or Madam
I am writing / This is just a note to confirm a reservation that **was made / I asked you for** this morning by telephone. The reservation for **a couple of / two nights**, is for **me / myself,** David Cook.

Thank you / Thanks for sending me the brochure **about / regarding** your conference facilities, which I **got / received** this morning. They look **most interesting / great**.
Unfortunately / I'm sorry I can't give you / am unable to provide you with any definite dates **at the moment / now, as / because** we have yet to **finalize / sort out** the details of our sales conference. **But / However**, **I will contact you / 'll drop you a line** as soon as **I can / possible**.
I look /'m looking forward to meeting you.
Best wishes / Yours faithfully

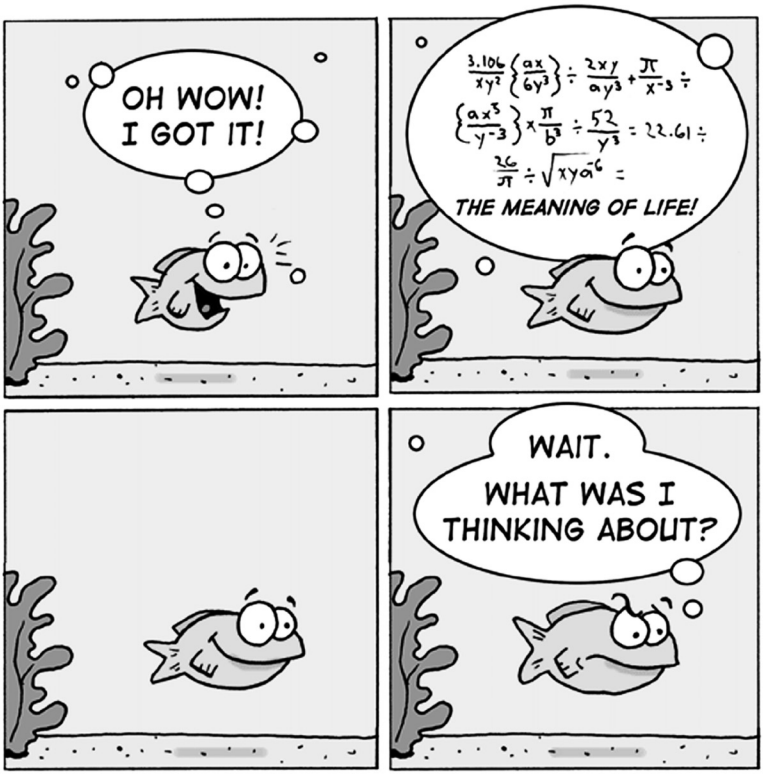
David Cook

June 16

177 Fulham Palace Road London
Phone o173437 88955
Fax number 0171 437 6900

Look at the picture and write a short story about a three second memory. Begin with…

Some people are constantly complaining of their memory, but think about this: what if the people had a memory of a … FISH ?



Case study

Memory

Introduction

Memory is the ability of humans to know more about themselves, their surroundings and their past. Memory also enables us to learn about other societies, and historic events. Some of the memories are good and positive, but some are grim and dreadful. However the world without memories would be meaningless and dull. During this case study activity think about the value of your memories, good and bad and share it with your class

Task

Before you begin working, take a moment to browse the web to research various historical events and people that have impacted the world we know. You will look at different countries and cultures and learn how they compare with the one you live in. Then you are required to find information on per capita income (the amount that the average person in that country earns), economically active population, life expectancy, and school enrolment for the following five countries (or five others of your choice); Afghanistan, Mexico, the Russian Federation, Somalia, and the United States of America. Use specific examples from your research in your answer. When you have finished dig into your own past and that of your family to see where you have come from

Process

It is time to investigate where you have come from. You are going to gather memories from your family's past. You may use parents, grandparents, aunts, uncles, etc. The only requirement is the memories have to come from someone who is at least 20 years older than you. Keep in mind, the memories you uncover may be good memories, but they may also be bad memories. Your relatives may share memories of their childhood, of their parents, of trips they have taken or things they have seen. They may share stories of love, or war; the possibilities really are endless. But, regardless of what the memories are about or whether they are good or bad, be sure to write them down or record them. Remember, your relatives are passing their life on to you and it should be recorded.

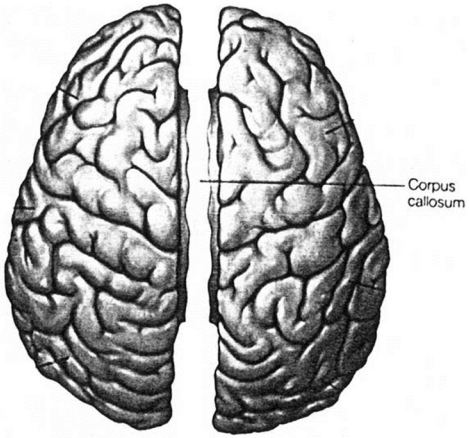
Once you feel you have gathered enough information or memories, it is time to begin creating your "Treasure Chest." You will need an old shoe box (or something of the same size) to "put" your memories in. Note, you will need enough items to fill your container, but if you have too many, you may have to eliminate some of them.

Your "Treasure Chest" should include:

- AT LEAST 5 memories from your relatives, either written down or on tape (talk to at least 4 different relatives)
- mementos to go along with these memories, such as personal items from them, or information and pictures about particular events in their memories

Unit 7

The human brain



- **Speaking and Reading**
  Pre- reading task.

Study the phrases below which contain words and expressions used to talk about ADDITION:

Adding words at the beginning of clauses	Adding words at the end of clauses	Adding words in the middle of a clauses
You need a degree for this job. **In addition,** you need some experience. **In addition** to his BA in Law he has a Ph. D. in Sociology. Computers are becoming easier to use. **Furthermore/ Moreover /What is more,** they're becoming cheaper.	They sell software, hardware, spare parts, **and so on.** The question raised at the conference concerned the moral and legal aspects of long-term imprisonment, the rights of inmates, social rehabilitation programs, **etc.**	He is a good lecturer, **as well as** being a talented researcher. This incident, **along with other** similar cases led to an extensive debate in Parliament

Apart from having a salary, he also has a private income. **Alongside** her many other hobbies she is a good cook. Children should respect their parents. **Equally/ Likewise,** they should respect their teachers. It'll take ages to get there and it'll cost a fortune. **Besides,** we'll have to change trains at least three times.		

1 Using your background knowledge, tell the class what you know about the human brain and its functions.

2 Below is a list of some characteristics of the human brain. Match each characteristic with the appropriate explanation. The first one is done fore you.

Characteristics of left and right hemispheres of the human brain	***Explanations***
1 verbal 2 non- verbal 3 spatial 4 logical 5 linear 6 synthetic	❑ putting things together to form wholes ❑ using words to name, describe, define ❑ thinking in terms of linked ideas, one thought directly after another, often leading to a convergent conclusion ❑ drawing conclusions based on logic ❑ seeing where things are in relations to other things, and how parts go together to form a whole

Read the text and find out which of the six characteristics are controlled by left and which by right hemispheres.

The two sides of the brain.

The fact that human brain is divided into left and right hemispheres is not a new discovery. Once the skull is removed the division is obvious to the naked eye, and it is a common feature of brain throughout the animal kingdom. What is interesting about this division in man is that each half seems to have developed specialized functions, the left side appearing to do better at some tasks and the right side better at others.

The most obvious difference in functioning is what is known as crossover effect, that the left hemisphere controls the right sides of our bodies and vice versa, that the right hemisphere controls the left side of our bodies. This crossover effect is something that has been known for a long time. The ancient Egyptians for example knew that injuries on one side caused paralysis on the other side of the body. At the beginning of this century it was known that damage to certain areas of the left hemisphere resulted in things like loss of speech or in poor reading, showing that the left hemisphere controlled our verbal abilities. Damage to the left hemisphere can also cause general deterioration in logical thinking. And damage to the right hemisphere could lead to deterioration in visual and spatial functions, so for instance someone might have problems in recognizing faces or in dressing himself.

But the real breakthrough has come in much more recent years. The scientists at California Institute of Technology conducted experiments with epileptic patients during which the corpus collosum (the thick nerve cable that connects the two halves of the brain) had been cut and the patients had split brains. The scientists showed that if a patient was given something to hold in his right hand he could say what he was holding, because the information was going to the left side of the brain. But if the object was in his left hand he couldn't describe it, he could only make a guess.

Another interesting finding was that, although the right hand, after splitting of the brain, was still able to write, because verbal ability is located in the left hemisphere, but it lost the ability to draw pictures. And with the left hand the opposite was the case.

Other experiments have shown that the left hemisphere is specialized in a kind of a linear processing of information, of analyzing information one bit after another, while the right hemisphere specializes in a parallel processing, in taking several bits of information together and forming from them synthesis.

So it seems that each one of us has a double brain with two ways of knowing. Each of our hemispheres gathers in the same sensory information and processes it in different ways.

Comprehension check:
1 Is a) b) or c) correct in each statement below?

1 If the skull is removed the division of the brain ...
- a) can be seen only with a microscope.
- b) can be seen even without a microscope.
- c) can't be seen at all.

2 According to the text ....
- a) only human beings have the two sides of the brain.
- b) both human beings and animals have the two sides of the brain.
- c) only animals have the two sides of the brain.

3 The fact that left hemisphere controls the right side of our body and vice versa...
- a) is a new discovery.
- b) has been known since ancient times.
- c) was discovered by Egyptian scientists.

4 The experiments with epileptic patients showed that...
- a) the two hemispheres are connected by the thick nerve.
- b) epileptics have split brains.
- c) after splitting of the brain the patients lost the ability to write with their right hand.

2 Explain the phrases in bold.
*1) ... it is **a common feature**...*
*2) ...each half **seems to have developed** specialized functions.*

3) *...damage to the certain areas of the left hemisphere* ***resulted in things like loss of speech....***
4) *But* ***the real breakthrough*** *has come in much more recent years.*

- **Vocabulary**

1 Match a word on the left with a noun on the right to find the meaning of a phrase.

1) make	a) eye = normal power of eyes to see without a telescope or a microscope
2) animal	b) effect = a process when one half regulates the opposite one and vice versa
3) crossover	c) ability = ability to speak and write
4) naked	d) speech = an instance of loosing spoken ability
5) verbal	e) a guess = to suppose sth
6) loss of	f) kingdom = one of the three divisions of the natural world

2 Fill the space in each sentence with an adjective formed from the verb or noun on the left.

1 experiment	Doctors stress that this type of treatment is still _____.
2 effect	He was seeking to make health service as _____ as possible.
3 recognize	She was barely _____ as the girl I had known at school.
4 scientist	They are involved in a very important _____ research.
5 information	The text is interesting and _____without being too technical.
6 describe	I don't like _____ passages in novels.
7 analyze	He used an _____ approach in studying this phenomenon.

3 Compounds and dictionary work

Words can combine to make new words. Look at the examples and note the different spellings. There are no rules.

life *lifestyle* *lifelong* *life- size*
life expectancy *life insurance*

1 Work in pairs. Look at the text on page 63 and find compounds.

2 Combine words on the left with words on the right. Use your dictionaries to help with the meaning and spelling.

brain **mind**	reader drain bending death teaser wave blowing set storm

4 Idioms:

1 Match each idiom with the correct explanation.

1 to rack one's brain about something
2 to pick someone's brains
3 to have something on the brain
4 to have a brain wave

- to have a good thought or idea which comes unexpectedly or suddenly
- to think repeatedly or constantly about something
- to think very hard or for a long time, trying to find a solution to the problem
- to talk to someone about a problem to get to know and later use his knowledge or ideas on that manner.

2 Now use the appropriate grammatical forms of the idioms to replace the pictures:

He'd had the tune  all day. It was so irritating!

He simply couldn't remember where it came from. He 

A Mozart concerto? A Beethoven symphony? A Schubert song? Then he had  Why not speak to John and 

John knows a lot about music. He would surely know where that tune comes from...

3 Try to use the idioms in the sentences of your own.

Make the most of your mind

1 ***Here is a standard creativity test that is used in schools, colleges and large business organizations.***

Give yourself exactly two minutes to write down, as fast as you can, all the different uses you can think of an ordinary paperclip.

Score yourself:

Add up the total number of uses you thought of. Divide this number by two. This will give you an average number of uses thought of per minute.

What do you think of the test? Does it measure some aspects of your creativity?

2 ***The author of the text below doesn't think that the test you have just done is a valid one. He thinks the test has two main faults. What are these?***

Creativity

Creativity, of all the mental areas, is that one in which most people rank themselves especially low. This is not surprising, because the 'creative brain' is generally left out of education. Any activity which involves imagination, color, rhythm, or form has been traditionally frowned upon as 'less intelligent'. Fortunately we now have more information to work with, and creativity can be seen as a necessary part of a well- balanced education and personality.

The test you have just done is one of the traditional tests given to measure this aspect of our intellect. The faults of this test were of two main kinds. First, it assumed creative ability to be simply quantitative – i.e. dependent on the number of uses a person could think of; and secondly, even in the quantitative area it was weak. It did not actually measure the 'basic' or 'innate' capacities that it purported to measure – that is, creativity. Instead it measured how inadequately the brain had been taught to combine language and imagination.

All that the test measures is the rigidity with which the person being tested has been taught to use language, especially words like 'uses'. The more rigidly taught mind will assume that 'uses' refers to ordinary sensible applications of a paperclip. The less rigidly taught mind, and the one which consequently will be regarded as more

creative, will find more expansive interpretations of the word 'uses', and consequently will come up with many more applications for the paperclip. The creative genius will break all the ordinary boundaries, and will include in his list many 'far out' applications such as melting a few million of them down to form the shell of a space- ship.

The creative mind is expanding his connections for the word 'uses' to include the phrase 'connections with'.

Realizing that this is a proper method of performing in a creativity test, and remembering that the mind can make a virtually limitless series of connections, linking any one thing to anything else, we realize that our score can immediately go off the top of the chart.

3 Look at the list of 40 items below. In pairs or small groups, give yourself five minutes to see haw many associations you can make between the items and the idea of paperclip.

' For some of these you will be able to find connections immediately, others may at first seem obscure and impossible. In the end you will find they can all be connected to "paperclip" in some way, as did the person who connected them all except "pigeon". This he was convinced had no connection, until a friend suggested using a paperclip to fix an important message on to the pigeon's leg'.

(From Make the Most of Your Mind by Tony Buzan)

orange	light bulb	pigeon	cloud	wood	dinner
tea	pub	watch	handbag	kitchen	maid
pepper	rain	tree	banana	window	radio
pen	bottle	glass	water	house	potato
mirror	leaf	tire	shoe	chair	cup
holiday	wine	table	ear	book	Germany
garden	garage				
newspaper					

4 Write one word in each space:

creates	imaginative	fault	influential	revealed	inhibits

Most people's first experience of learning another language was, unfortunately, not very successful. Yet _____ educationalists and psychologists now agree – it wasn't you that was at_____, it was the teaching method.

Nobel Prize-winning research has recently _____much more about the brain – how it really works, how it remembers.

The result is Accelerated learning. It's easy, fast and above all, genuinely enjoyable. Tension _____learning. So parts of Accelerated learning use soothing rhythmic background music, which _____a receptive state of mind, and also provides a strong memorable link to the words you are learning.

It's best to use both sides of your brain. We know that the left brain uses logic, whilst the right is more powerful, more _____, more visual.

5 Here are two articles that have been mixed up. Look at the headlines and decide which sentences go with which article. Put them in the right order

Sense of Sight

The Nervous System

1 This 'computer' is your brain.
2 The spinal cord and the brain are important parts of the nervous system.
3 Among other things, the brain controls thinking, creating and remembering.
4 Your eyes are like a camera in that they take pictures.
5 Your brain interprets what it is you are seeing.
6 The organs of the body that act as a message center make up the nervous system.
7 When the picture reaches your brain, it is interpreted as being funny.

8 But unlike a camera, your eyes send messages to a computer
9 These organs are composed of nerve cells.
10 When you see a funny picture, it will not really seem funny to you until it reaches your brain.
11 Nerve fibers also carry messages from the spinal cord and brain to other parts of the body.
12 Nerve cells form fibers in the body that carry messages to the spinal cord and brain.

LISTENING

- **Before listening: Read the headline. Guess if a-h below are true (T) or false (F).**

a. A university said bilingual people have more powerful brains. T / F
b. Researchers say studying languages increases our ability to T / F focus.
c. Listening to other languages activates a newly-found part of T / F the brain.
d. The researchers say bilingualism enhances attention and T / F memory.
e. The study says bilingual people are better at crossword T / F puzzles.
f. Researchers say good things come automatically with T / F bilingualism.
g. The researchers said bilinguals are good at juggling different T / F objects.
h. A professor said bilinguals totally ignore irrelevant sounds. T / F

T.7 Listen and find out whether you answered correctly or not

Listen again and fill in the gaps

A study by the USA's Northwestern University _____ evidence that people who are bilingual have a more powerful brain. Drs Viorica Marian and Nina Kraus _____ bilingualism affects the brain. They found that studying another language "fine-tunes" people's _____ and enhances their memory. In particular they discovered that when language learners attempt to understand speech in another language, it

_____ the brainstem – _____ the brain. Professor Kraus stated: "Bilingualism serves as enrichment for the brain and has real consequences _____ … attention and working memory."

Professor Marian explained why studying and learning another language was _____ the brain. She said: "People do crossword puzzles and other activities to keep their minds sharp, but the advantages we've discovered _____ speakers come automatically simply from knowing and using two languages." She added: "It seems that the _____ are particularly powerful and broad, and include attention, _____ of sound." She said bilinguals were better listeners because they are "_____" of sound. She said: "The bilingual juggles linguistic input and, it appears, automatically pays greater attention to relevant versus _____."

SYNONYM MATCH: Match the following synonyms from the listening passage.

1.	evidence	a.	especially
2	investigated	b.	triggers
3.	enhances	c.	advantageous
4.	activates	d.	proof
5.	ancient	e.	intelligent
6.	beneficial	f.	boosts
7.	sharp	g.	deals with
8.	dual	h.	inquired into
9.	particularly	i.	twin
10.	juggles	j.	old

- **Writing**

Writing a letter of application

1 Read the letter of application. Put one word into each gap. Compare your answers with a partner.

1 There are three paragraphs in the letter. What is the aim of each one?

2 Write a letter of application for any imaginary job:

17 Hillside Rd
Chesswood
Herts. WD 3 5LB
Tel 093645 28846
Fax 093645 28756
Thursday 17 January

David Benton
Roslin Institute, Edinburgh
357 Ferry Rd
Basingstoke RG2 5HP
Dear Mr. Benton,

I saw your..... for a Laboratory Assistant in today's Guardian newspaper. I am very..... in the job and I think that I have many of the necessary..... .

I..... Genetics at the University. I am ..... in French, Russian and Armenian. I have ..... widely in Europe and South America, and I..... worked as an assistant at Center for Genomic Research in Yerevan for the last five years.

I enclose a copy of my curriculum vitae. I look forward ..... hearing from you soon. Please let me know if you need more further information.

Yours sincerely

Nancy M.

Case study

Creativity

Introduction

You are applying to be a magazine editor for a magazine that is loosing subscriptions and needs help regaining their lost audience and improving their declining sales.

Creativity is a must for this position!!

In order to demonstrate your creativity you must create an acrostic poem of your name using 3 types of figurative language. The acrostic poem should include any three of the following types of figurative language: similes, metaphors, personification, hyperbole, alliteration, idioms, oxymoron or onomatopoeia.

Include in your electronic portfolio a persuasive paragraph or two explaining the importance of using figurative language in writing.

It should be turned into the editor in a colorfully illustrated electronic portfolio using PowerPoint.

Task

You are going to use your investigative research skills to learn about at least 3 types of figurative language.

Then as the final assessment, you will share your electronic portfolio with the class who will be evaluating your figurative language skills to determine if you are qualified for the job.

You will be using the internet to learn about at least 3 types of figurative language. This is needed to complete the following:

- Choose at least 3 types of figurative language to learn about
- Take notes of key elements of each - to include definition
- Record 2 to 3 examples for each of the 3 chosen types
- Create a PowerPoint with your 3 chosen types of figurative language.

Create an Acrostic Poem of your name using the 3 types of figurative language you have researched. Add these slides to your PowerPoint

Include a persuasive paragraph or two about why figurative language is critical to writing creative magazine articles as well as other forms of writing. Add these slides to your PowerPoint.

The colorfully illustrated electronic portfolio (PowerPoint) will include your minimum of 3 types of figurative language, an acrostic name poem using at least 3 of the types of figurative language you have mastered: similes, metaphors, personification, hyperbole, alliteration, oxymoron, idioms or onomatopoeia. The Persuasive paragraphs will also be added to the Power Point.

Process

You will be using the internet to learn about at least 3 types of figurative language. This is needed to complete the following:

STEP 1:

- Choose at least 3 types of figurative language to learn about
- Visit the internet sites listed below for the figurative language types
- Label 3 index cards with the types of figurative language

you're investigating
- Take notes using index cards of key elements of your figurative language - to include definitions
- Record 2 to 3 examples for each of the 3 chosen types
- Create a PowerPoint to display your types of chosen figurative language.

STEP 2:
- Create an Acrostic Poem of your name using the 3 types of figurative language you have researched.
- Edit poem with a partner prior to typing the final copy
- Add to your PowerPoint

STEP 3:
- Use research information to begin a rough draft for paragraph or two about importance of using figurative language in magazine articles as well as with other forms. This should be done using the persuasive genre.
- Complete the rough draft and edit with a partner
- Add to your PowerPoint

Step 4:
- Create a colorful electronic portfolio (PowerPoint) to display your minimum of 3 types of figurative language, your Acrostic name poem, and your persuasive paragraphs

FIGURES OF SPEECH

Similes:
http://en.wikipedia.org/wiki/Simile
http://www.saidwhat.co.uk/spoon/similes.php
http://www.rhlschool.com/eng3n25.htm
http://www.how-to-study.com/similes.htm
http://www.tnellen.com/cybereng/lit_terms/simile.html

Metaphors:
http://en.wikipedia.org/wiki/Metaphor
http://www.rhlschool.com/eng3n26.htm
http://www.how-to-study.com/metaphors.htm
http://owl.english.purdue.edu/handouts/general/gl_metaphor.html
http://efl.htmlplanet.com/metaphors.htm

Hyperbole:
http://en.wikipedia.org/wiki/Hyperbole
http://volweb.utk.edu/school/bedford/harrisms/hyperbole.htm
http://www.worsleyschool.net/socialarts/hyperbole/hyperbole2.html

Personification:
http://en.wikipedia.org/wiki/Personification
http://www.tnellen.com/cybereng/lit_terms/personification.html
http://library.thinkquest.org/J0112392/personification.html
http://volweb.utk.edu/Schools/bedford/harrisms/7lesson.htm

Alliteration:
http://en.wikipedia.org/wiki/Alliteration
http://www.tnellen.com/cybereng/lit_terms/alliteration.html
http://volweb.utk.edu/Schools/bedford/harrisms/1allitera.htm
http://volweb.utk.edu/school/bedford/harrisms/allitera.htm

http://www.dowlingcentral.com/MrsD/area/literature/Terms/alliteration.html

Onomatopoeia:
http://www.wisegeek.com/what-is-onomatopoeia.htm
http://en.wikipedia.org/wiki/Onomatopoeia
http://www.primaryresources.co.uk/english/onomat.htm
http://www.tnellen.com/cybereng/lit_terms/onomatopoeia.html

IDIOMS:
http://www.idiomsite.com/
http://www.usingenglish.com/reference/idioms/
http://en.wikipedia.org/wiki/Idiom
http://www.goenglish.com/Idioms.asp

OXYMORON:
http://en.wikipedia.org/wiki/Oxymoron
http://www.fun-with-words.com/oxym_example.html
http://www.guy-sports.com/months/jokes_oxymoron.htm
http://wiki.answers.com/Q/What_are_examples_of_an_oxymoron

Unit 8

Inventions

- **Speaking and Reading**
  Pre- reading task.

Study the phrases below which contain words and expressions used to talk about CAUSE, REASON, PURPOSE AND RESULT:

Cause	Reason and Purpose	Result
Owing to the weather conditions the flight was cancelled. The delay was **due to** the weather conditions. The delay was **caused by** the weather conditions.	Her **reason for** not going with us was that she had no money, *or:* **The reason** she didn't go with us **was that** she had no money. She wrote to the press **with the aim of** exposing the scandal.	he missed a lot of classes. **As a result/ As a consequence/ Consequently,** he failed hi exams.

The cause of the delay was a thunderstorm. This problem **stems from** the inflation of recent years. The new law has **brought about/led to** great changes in education.	I have invited you here **with a view to** resolving our differences. He refused to answer **on the grounds that** his lawyer wasn't there. **The purpose of** their visit was to inspect the equipment.	His remarks **resulted in** everyone getting angry. The events **had an outcome** that no one could have predicted.

Read the extract from an article on genetic engineering.

1What do you think? What good or bad uses can be made of this development?
2What can scientists now do to our genes?
3Which predictions surprise you?
4Which illnesses are the biggest problems to health in your country?

Changing your genes.

Why life will never be the same

Nature was the last frontier. But now scientists can take 'nature' apart and put it back together again. In plants, animals and potentially humans it will be possible to change genetic characteristics.

Genetically engineered drugs will fight disease, and most major illnesses will be curable by the time today's babies are out of their teens.

Common cold *cure expected within ten years*

Heart attack *Controllable now. Preventable in 10-20 years.*

Cancer *Cures for most cancers in 10-20 years*

Diabetes *Cure expected within ten years.*

AIDS *Symptoms controllable within 5 years*

Injury *Rapid healing products available within ten years*

From Sunday Times Magazine

Read the title of the article first. Would you like to live so long? What would be your daily routine? How would you fill your time?

Cheer up, you could live until you're 400!

Now read the article. What predictions and facts are given there. Do you agree with the author's point of view?

Scientists claim they are close to discovering how people could live to be 400.

They believe they are near to producing drugs, which would almost stop the aging process. But horrified experts said that stopping aging would result in millions of smooth- faced individuals waiting for death as the only relief from boredom. People wouldn't marry until they were 60. Women would be giving birth at 80. Laws would have to be passed to stop them having more than two children. At the age of 395, most people's memory banks would be full. They would have to be extended by hormone treatment.

In the era of the Roman Empire life expectancy was 22 years. It is found out that today the average age is 75 and people over 85 make up the fastest growing part of the population. There are now over 36, 000 centenarians in the US. In thirty years there would be 266,000. One of the scientists has even announced that as they learned to control the genes involved in aging, the possibility of lengthening life appears practically unlimited.

Comprehension check

1. Are the statements true or false?

1 The main idea of the article is that living long is wonderful.
2 The drug which can lengthen people's life has already been discovered.
3 The negative side of this invention could be unlimited growth of population.
4 Nowadays the number of people aged one hundred years is growing.
5 Scientists intend to control genes involved in aging for making people immortal.

2 Working in pairs find a word in the text that means:

a) *near(adj)*
b) *shocked(adj)*
c) *a feeling of comfort and happiness after some unpleasant feeling(n)*
d) people aged one hundred years and more (n)
e) *length of life(n n)*

- **Vocabulary**

1 Match each phrase with a sentence describing it.

1)	to be close to	a)	to establish certain rules for regulating behavior of the people in community
2)	to be the only relief from	b)	to be connected with sth
3)	to pass a law	c)	to almost reach sth
4)	to be involved in sth	d)	a pleasant change or break after sth unpleasant

2 The extract and the article you have read contain five phrasal verbs. Look back and find them. Match the meaning of each phrasal verb to its synonym in the box.

a separate	**c** form	**e** enliven	**g** collapse	**i** reduce
b return	**d** discover	**f** assess	**h** explode	**j** depress
k arrive	**l** destroy			

3 Complete each sentence with either *up* or *down.* Then match the meaning of the phrasal verbs you have formed with a verb from the box above.

1 Her health broke _____ under pressure of work..
2 A soldier was injured when the bridge he was crossing blew _____.
3 The doctor told him to cut _____ on his drinking.
4 It was ten o'clock when he finally showed _____.
5 This wet weather is getting me _____.
6 Before taking any action they decided to size _____ the situation.
7 The old houses were being pulled _____ to make way for the new street.

Read the text and express your opinion about the inventions.

5 Greatest Scientific Inventions

Inventions are exciting; the creation and development of something useful makes the world fuller and richer. They are the

physical representation of human ingenuity and creativity. In the fields of engineering, technology, and medicine, these five scientific developments have had the most impact on society. They are all results of immense dedication and have become a central part of life and culture.

Penicillin

Alexander Fleming discovered penicillin in 1928, but this medicine didn't become available to the public until 1948, when Andrew Moyer patented the first method of mass production. For his discovery, Fleming received a Nobel Prize in 1945. Penicillin revolutionized medicine and led to the development of life saving antibiotics. Derived from the Penicillium mold, this antibiotic agent is one of the most widely used. Antibiotics engage in chemical warfare on a microscopic scale. They naturally release bacteria and fungi into their environment as a way of suppressing other organisms. It is impossible to know how many lives have been saved by penicillin, but some estimate that it is over 200 million.

Light Bulb

Electric light has illuminated the world, literally, taking us from gas lamps to the energy efficient bulbs of today. Contrary to popular belief, the light bulb was not invented by Thomas Alva Edison; he only improved upon the idea. Fifty years before, in 1809, Humphry Davy, an English chemist, invented the first electric light. In 1878, Sir Joseph Wilson Swan, an English physicist, was the first to invent an electric light bulb with a carbon fiber filament. This was longer-lasting, with over 13 hours of illumination. In 1879, Edison invented a carbon filament that burned for 40 hours, and the modern day light bulb was born.

X-Ray Machines

X-rays are part of the electromagnetic spectrum capable of cutting through different types of matter. Medical X-rays work the same way as the X-rays emitted by the sun or stars; a stream of fast moving electrons produces them. In 1895 Wilhelm Conrad Rontgen discovered the X-ray by accident. He was experimenting with his cathode ray generator and noticed that the beams sent out by the machine were able to infiltrate and reach deep layers of various materials. He then realized that he could use this machine to produce images of the human body. These images are a result of the different absorption rates of

various types of tissues. Calcium in bones absorbs X-rays the most, so bones look white on a film recording, while fat and other soft tissues absorb less and look gray. Once he realized the machine's capability fully, Rontgen worked on improving it so that the public could use it.

Microscope

A microscope is an instrument used to see objects that cannot otherwise be seen with the unaided eye. There are many types, but the most common is the optical microscope. This was the first to be invented and it uses visible light and a system of lenses to magnify images of small samples. The actual inventor is difficult to name, however, Galileo's optical microscope was celebrated in 1624 and was the first device to be officially called a microscope. This simple instrument has since evolved into electron microscopes, which use electron beams to brighten a specimen and produce an enlarged image.

Printing Press

The printing press played a pivotal role in developing mass literacy and education. Invented in 1450 by German scientist Johannes Gutenberg, this product revolutionized science. It made it possible for the scientific community to share their findings and communicate results. This device used movable type characters and letters to make multiple identical copies of a document. Before the printing press, copies of documents had always been made by hand, making it extremely slow and expensive to produce; not to mention lots of copying errors.

A relatively simple idea can sometimes transcend into a successful, mass-marketed product. All of these inventions have left their mark on history and made life easier for millions of people. The brilliant scientists responsible for their creation followed the scientific method, and with a bit of ingenuity, risk, and triumph developed life-changing innovations. Only time will tell what new and exciting discoveries lie ahead.

Answer the questions

1. Only 5 scientific inventions are mentioned in the passage. Think of some other inventions that have revolutionized the world. Which of all these inventions do you think is the most important?

2. Try to imagine what would happen if the inventions mentioned in the passage haven't been made?

3. While Leonardo Da Vinci is not on this list, he is thought of as

one of the greatest inventors of all time, yet most of his ideas where just that, ideas. Preserved in his notebooks, Da Vinci drew sketches and diagrams of his inventions, many of which were never built. As a result, his ideas did not come to fruition during his lifetime. Some of his sketches included armored tanks, airplanes, parachutes, and water wheels. Use the Internet to find out more about the inventions made by Leonardo Da Vinci. What other scientists had ideas that were later made into great inventions**?**

1 Fill in the gaps with a word or a phrase from the box:

preliminary	side effects	conventional	tumor	juvenile
treatment				

1 Doctors have observed that this disease doesn't respond to _____ methods of therapy.
2 The number of _____ under 25- 30 year with serious health problems have dramatically increased in the recent years.
3 Though the _____ results of the study have been announced the final conclusion hasn't been made yet.
4 The drug has no serious _____ , but in any case a very long drug – taking may cause deterioration.
5 He should immediately undergo medical _____.
6 Fortunately the _____ that has been found in his brain appeared benign.

LISTENING

Before you listen,

What springs to mind when you hear the term 'renewable energy'? Think about sources of renewable energy.

Invent some crazy gadgets? Complete this table with your partner(s). Change partners and share what you wrote. Change and share again.

Power from…	Name	Function	How it works
your heartbeat			
blinking			
body temperature			
chewing			
thinking			
talking			

Which of these do you think will we use most in 2112? Rank them and share your rankings with your partner. Change partners and share your rankings again.

- oil
- wind
- solar
- coal
- tidal
- thermal
- nuclear
- something totally new

T.8 Listen to the passage then answer the following questions.

a) What do you think of the AIRE?
b) Will you buy one when it hits the shelves?
c) Do you think it will be too uncomfortable to wear?
d) What do you think of breath power as a source of renewable energy?
e) How big of an impact could this have on the environment?
f) Would you sleep with the AIRE to recharge your mobile phone?

Listen again and fill in the gaps while you listen.

A Brazilian inventor has come up with a new _____ your breath into electricity. This means breathing has become a _____ energy – at least while you are alive. Joco Paulo Lammoglia, from Rio De Janeiro, won the Red Dot design award for his AIRE device. His invention uses the _____ breathing and changes it into energy that can power mobile phones and iPods. _____ the AIRE charger create the electrical power from your breath. The device is _____ and can be used while exercising or even when sleeping. Mr Lammoglia hopes his new creation _____ environment. Lammoglia explained _____ the AIRE will become. He said: "I hope to bring the concept into production and reduce the carbon footprint. It can be _____, while you're sleeping, walking, running or even reading a book." He also said his invention encouraged people to exercise _____ energy and the environment. He explained why he thought the AIRE was so useful, saying: "Though many of our modern _____, they tend to use a high amount of electrical energy. Harnessing energy from human activities _____ into electricity is possible and is a great solution." The product is not yet on sale but is sure to be a big seller when it does _____.

SYNONYM MATCH: Match the following synonyms from the listening passage.

1. come up with	a. miniature
2 gadget	b. prompted
3. flow	c. idea
4. tiny	d. movement
5. creation	e. produced
6. concept	f. make use of
7. encouraged	g. answer
8. harness	h. gizmo
9. solution	i. go on sale
10. hit the shelves	j. invention

- **Writing**

1 Discuss in groups what innovations may happen in the near future.

2 List reasons you think one idea you discussed either will or won't happen.

3 Look at the expressions below for linking points in an argument. Which expressions can:

a) begin	b) continue	c) end an argument?
Lastly,.....		Added to this,.....
In the first place,.....		Furthermore,.....
To begin with,.....		Finally,.....
As well as this,.....		

4 Use some of the words above to link the ideas you listed in a paragraph. Begin like this:

In my opinion,.....

5 Look at the picture and write a story about the experiment including the following information.

Professor Nesbit and his research assistant ...trying to discover a drug... make people more intelligent ..... done many experiments ...all failed ... rats died..... decided to conduct one final experiment one Friday afternoon ..... rat died.....

1

'Well, Thenshaw, this is the last chance for our super-intelligence drug XLR6. I've just given the rat the injection'

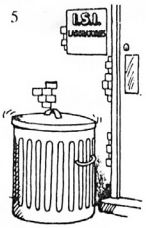
2

Yet another one dead!! That's it. I guess... it doesn't work. Take it away

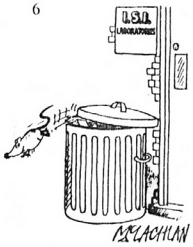
3

4

5



6



Case study

Inventions

Introduction

Have you ever thought about the millions of inventions that have been created? Which inventions are the most important to you? Through this Case study activity you will be able to learn about different inventions by using some links on the Net. You will get to know who invented certain gadgets, what are some inventions good for, our need for them and the moment when these were invented. You will work with some inventions that belong to certain categories and create a display of the most important ones to you.

Task

You are members of a group of scientists. As members of the team your job is to assist in compiling a database of the most important inventions.

You will compile information that basically answers who invented what and when, and see that many inventions were developed a long time ago and evolved; why do we need these inventions and tell how they affect our daily life; and what they are good for, thinking about why things were invented. As a result of your quest, you will choose the most interesting and important to you and show them in a PowerPoint slideshow.

Process

Step 1

You will use the links to find information about inventions. You will be working in groups of 2 or 3. Remember, when you find one invention you have to think to answer these questions:

1. Who invented it?
2. When was it invented?
3. What is it used for?
4. Why was it invented?

Record the answers in the table provided by the teacher as soon as you find each invention.

These are the kind of inventions you have to find:

1 thing invented by a woman
1 thing invented before the year 5 BC
1 Armenian invention
1 Chinese invention
1 invention related to food
1 everyday item, that you have around your house
1 invention related to the world of communication

Step 2

When you have finished finding the information, choose the three that you think are the best and prepare a Power Point Presentation. For this activity you will probably need to go back to the web to look for some pictures of inventions. Think of a nice and logical way to organize the information.

Your first slide should be a title slide, and should include your name, and a title. In total you will need at least 4 slides. Be sure to include all of the when, who, what and why information that you have. Also include from 2-4 pictures of inventions or inventors that are in your show.

Research Links

Here are some links that you might want to use as you investigate your assignment.

1. *Twentieth Century Inventions*
   http://inventors.about.com/od/timelines/a/twentieth.htm
2. *Timeline of inventionshttp://www.ideafinder.com/history/timeline.htm*
3. *A site that explains some Chinese inventions*

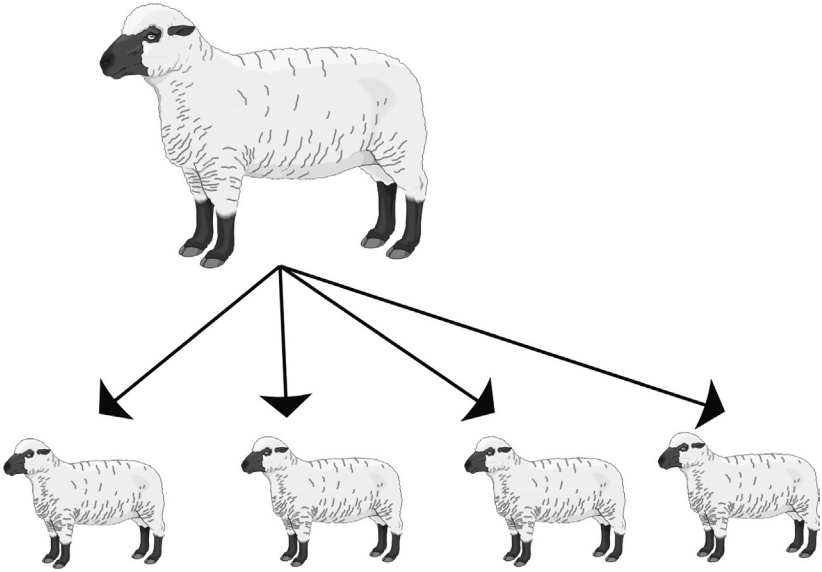
Chinese inventions http://www.china.org.cn/top10/2011-03/04/content_22054243.htm

4. *Food Inventionshttp://www.enchantedlearning.com/inventors/food.shtml*

5. *Check out these modern inventions.*
   Modern Inventionshttp://inventors.about.com/od/timelines/a/ModernInvention.htm

Unit 9

Cloning.



- **Speaking and Reading.**
  Pre- reading task.

Study the phrases below which contain words and expressions used to describe the degree of SUCCESS or FAILURE

- **I managed** to contact him just before he left the office.
- I don't think I can **manage** the whole task today – it's too big
- We **succeeded** in persuad**ing** a lot of people to join our project.
- This company has **achieved** all its **goals/aims/targets** for this year
- Do you think this plan will **come off/ succeed**?
- Plans and projects often go wrong or **misfire.**
- A plan or project may **falter** (go through ups and downs), even if it finally **succeeds**.

1 Using your background knowledge, answer the following questions.

1 What do you think human cloning means?
2 Is cloning the same as copying?
3 Is cloning a matter of technology, morality and religion or politics?
4 Why do you think most people are against cloning?

2 Study the following scale of probability from 'cannot happen' to 'has to happen'.

impossible – unlikely – possible – probable – certain - inevitable

3 Working in groups, imagine you live(d):

a) in the Middle Ages (The times of Inquisition)
b) in 1917
c) in our time
d) in 2050

Talk about the possibility of artificially creating people from the point in time you have chosen, using the above mentioned adjectives.

Read the following text and separate the arguments for cloning from those against it.

Get the facts.

Cloning is a method that involves the production of a group of identical cells or organisms that all derive from a single individual.

There are two possible ways of cloning humans. The first way involves splitting an embryo into several halves and creating many new individuals from that embryo. The second method of cloning humans involves taking cells from an already existing human being and cloning them, in turn creating other individuals that are identical to that particular person. According to the survey, conducted by American journalists, 74% of those asked believe it is against God's

will to clone humans, because human life is unique, born of a miracle that reaches beyond laboratory science.

But others argue in favor of continuing human cloning research, of continuing to clone human embryos and perhaps cloning adult humans in the future. Some arguments in favor of human cloning might include the fact that cloned human embryos would make research into genetics and genetically related diseases, and their treatment or prevention, much easier and cheaper. Cloning embryos could also facilitate the process of in- vitro fertilization, since the collection and replacement of ova is often traumatic, and can be unsuccessful.

Embryo cloning is also seen as a potential treatment for infertility when in- vitro fertilization is not available, such as when parents are infertile, or when one or both parents have a genome coding for certain undesirable traits or diseases. Cloned embryonic tissues might be used for the replacement of lost or diseased tissues.

Adult cloning might appeal to those who desire children/ adults who are genetically identical to themselves or to someone who they love and admire. Cloning could provide a genetically identical replacement for a lost loved one.

However, it is important to remember that a genetic clone, although sharing an identical genome with their donor, will not be physically and behaviorally identical to their donor, because surroundings and experience affect personality and lifestyle to such a great degree that in some cases the clone bears little resemblance to the original.

Comprehension check

1 ***Is a) b) or c) correct in each statement below?***

1 The article emphasizes that cloning is...

a) a method that involves artificial production of an organism from the cell.
b) a method of production of identical twins.
c) a method of copying people.

2 The possible ways of cloning are ...

a) taking cells from embryos or existing human beings and creating new organisms
b) fertilizing donor with a cell
c) taking cells from an adults

3 According to the survey most of the people think ...

a) Only God is the giver of life not a man
b) God gave the man knowledge and we must use it.
c) It's just another way of having children.

4 A clone will be ...

a) only physically identical to the original.
b) both physically and behaviorally identical to its original.
c) only genetically identical to the donor.

2 Find a word in the text that means:

a) to regard sth with respect, approval (v)
b) to express an opposite opinion (v)
c) that can be obtained or used (adj)
d) same (adj)
e) unlike anything else (adj)
f) sth which is desired by sb (n)
g) a thing done to relieve or cure illness (n)

- **Vocabulary**

1 Choose the correct meaning a or b, of the words on the left.

1 involve 2 include	a) to have sth/sb as a part b) to have sth/sb as a part of a whole
3 will 4 desire	a) a strong feeling of wanting to have or do sth b) a strong determination, wish
5 trait 6 behavior	a) one's attitudes and manners b) an element in sib's personality; a distinguishing characteristic
7 particular 8 unique	a) unlike anything else b) individual; special

2 Write one of the words in exercise 1 in each space. Make all the necessary changes.

a) The conference delegates _____ many representatives from abroad.
b) All the students were _____ in making experiments.

a) Despite her terrible injuries, she hasn't lost her _____ to live.
b) She experienced a sudden overwhelming _____ to return home.

a) She was ashamed of her children's _____.
b) Her fondness for hard work is a family _____.

a) It was a matter of _____ importance.
b) Everyone's fingerprints are _____

3 Phrasal verbs (2)

1 The text you have read contains synonyms to three of the following phrasal verbs in the box. Read the text once more and find them.

come out of	put up with	look forward to	go on with
get on with	look down on	keep away from	face up to

2 Complete the sentences with one of the phrasal verbs from the box above.

1 I don't think I can _____ his behavior much longer.
2 He took a sip of water and then _____ his story.
3 The book he wrote _____ his experiences in India.
4 She is such a snob. She _____ everyone who doesn't have as much money as she does.
5 _____ reality. You've got to realize that you are responsible for your own actions.
6 We're really _____ having many children.
7 _____ me! I've got a terrible cold and I don't want you to catch it.

8 How do you _____ your neighbors? They are so noisy,

Read the text. What is in your opinion, the most amazing fact about Dolly the sheep?

A glimpse of history

The story about cloning did not start with the famous sheep 'Dolly'. A long time ago, in 1962, scientists tried to clone frogs, but they never got past the tadpole stage. Only on February 22, 1997 scientists at the Roslin Institute in Edinburgh, Scotland announced that they had done cloning of a mammal from an adult cell. In general terms, the scientists took a mammary cell from a sheep and put it into an egg. They let this egg grow into an embryo, and then transplanted this fused embryo and put it into recipient ewe, acting as a surrogate mother. This was a crucial day for the cloning world.

A healthy lamb later born by Dolly helps counter fears that cloned animals may be prone to premature aging and other age- related disorders.

1 Fill the gaps with the appropriate words and expressions from the box. Note that some words can be used more than once.

survive; "twinned"; in the distant future; adult human; in the very near future; viable; fetal; subsequently; until; improved and perfected; techniques; clones.

_____ the birth of Dolly, it was believed that the ability to clone an adult human was either impossible or possible only _____. However, human embryos have been _____ in the past! These were not true _____(although they have been called so) and they were not _____, however they did not _____.

An_____ can be cloned _____. But a great deal more research and development of the _____ used to clone Dolly is needed. And it must be _____ for use on human embryos. Sheep embryos have

some special characteristics that make cloning them much easier than cloning human embryos. Cloning an adult sheep was extremely difficult to do; over 270 attempts were needed before Dolly was born. Many _____ lambs did not _____ the early stages of development. Those lambs that were carried to term were born with health problems, and all but Dolly _____ died.

2 Read the following facts and put them in the correct chronological order

A A tiny tadpole makes history as the first cloned animal. Using cells from a tadpole embryo, Robert Briggs and Thomas King create new tadpoles identical to the original donor.

B The earliest known instance of cloning was first envisioned by Hans Spemann, a German scientist. He proposes what he calls a ‘ fantastic experiment.’ He suggests taking the nucleus from a cell of a late stage embryo, juvenile or adult, and transplanting it into an egg. In other words, cloning.

C Early humans discover if they plant seeds produced by the earliest plants, the next crop will be a strong one. This is the first step in manipulating life to suit human needs – the ultimate goal of cloning.

D Cloning steps down to the minute level with the first cloning of a gene. Scientists isolate the gene, then bind it to an organism that incorporates the gene into its own DNA and multiplies, producing many copies of the desired gene.

E Rudolf Jaenish of the Salk institute for Biological Studies in La Jolla, Calif., inject human DNA into newly fertilised mouse eggs to produce mice that are part human. When mice reproduce they pass their human genetic material to their offspring, creating slew of so- called transgenic mice. Different human diseases can be studied by creating mice with the appropriate genetic composition

Here are the headlines for each passage. Match them with the correct paragraph.

Cloning is envisioned	***A better breed of corn***	***A tadpole is cloned***
Xeroxing a gene	***From mice to men***	

3 Complete the table with the correct part of speech.

verb	noun	adjective
	success	successful
accomplish		accomplished
achieve		achievable
	attainment	
fulfill		fulfilling
	realization	realizable
target		targeted
fail		

LISTENING

Before you listen try to answer the following questions

In which of these situations is it OK to use stem cells or cloning techniques?

a. So a childless couple can start a family.
b. So scientists can research into deadly diseases.
c. To bring back to life extinct animal and bird species (like Jurassic Park).
d. So same sex couples can have children.
e. To grow replacement body parts to use in life-saving transplants.
f. To make sure your children look exactly the same as you.
g. To increase the population in under-populated countries.
h. Other.

T.9 Listen again and fill in the gaps.

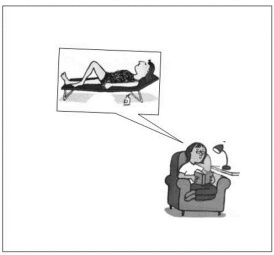
American scientists have, for the first time, taken stem cells from _____ that are genetic copies of living people. The goal is to create better treatment for disease. But the work has raised _____ about cloning, or making genetic copies of people. It is illegal to clone human beings in more than 12 states. Some _____ are carrying out what is called therapeutic cloning to try to fight disease. Still, even that method is banned in seven states. One state where therapeutic cloning is not banned is Oregon. Researchers at Oregon Health and Science university in Portland were able to put human DNA into modified human eggs. They produced embryos that were genetically the same as the people who donated their _____. The researchers then took stem cells from the embryos. These cells are called " master

cells". The scientists know how to use chemicals to cause _____ to develop into any tissue in the body. The idea is that doctors could use tissue created this way to replace _____. The new body tissue would be a genetic match of the person receiving it. And there would be no danger that the patient's body would reject the tissue. That can happen with normal transplants. Shoukrat Mitalipov let the study which involved more than 20 researchers. The scientists believe the stem cells can give doctors new way to treat _____, a degenerative movement disorder. Scientists believe they could use the DNA from a skin cell of someone with Parkinson's disease to create a personalized treatment.

SYNONYM MATCH: Match the following synonyms from the article:

a. replace	remedial
b. personalized	adapted
c. modify	adjust
d. treatment	cure
e. ban	prohibit
f. therapeutic	substitute

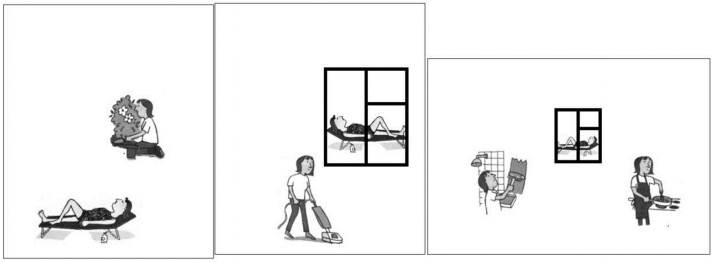
- **Writing.**



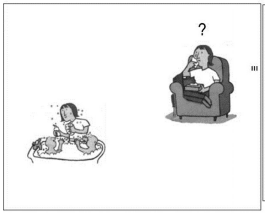
Look at the pictures and write a story about cloning. The beginning of the story has been done for you.

Once, after a very tiring day, Mrs Lazy read a book about human cloning. Being fed up with her life of a housewife, she thought.....
.... Very soon her dream came true and her clone arrived in her house.....

If I had my own clone I would relax all day long, and my clone would do all the housework



She felt absolutely happy, sunbathing all day long



But already in the evening she felt a bit bored.

The things got even worse, when in the evening her husband....

The only thing she was left to do was to leave her own house.

Case study

Cloning

Introduction

Have you seen the movies '*The Island'* and '*Resident Evil: Extinction*?' These movies enable us to see the creation of a person in many copies. In real life, human cloning does exist. The first human clone was Eve, born by a caesarean section in December 26th 2002! Eve was created by Clonaid by using the similar technique used in cloning Dolly, the sheep!

This Case study activity will lead you to understand why the mystery of the first ever cloned human baby, Eve, is still unresolved! From the day Clonaid claimed to produce Eve until now, we have yet to hear anything about her. What happened? Is she still alive? Is she hidden in a remote island? Is she in a testing lab, just like the other guinea pigs? Or worse, she could have developed major health problems just like Dolly and died!

Watch these movies and enjoy!

http://www.youtube.com/watch?v=3zINLAjm3rE (Cloning Collection)

http://www.youtube.com/watch?v=OiLLB85kp-c (Human Cloning) task

There are many controversies about human cloning in today's era. It's going to be like a rat race in the cloning industry now since Obama has lifted the ban on human cloning!

Task

In this Case study activity, you are given a big mission to accomplish - create a pamphlet on facts and issues of human cloning! You'll go

through some scientific and interactive explorations on the facts of cloning such as what cloning is, the types of cloning and how to create a human clone. You will also go on a big tour through the history or timeline of cloning. There are many questions to be answered.

Through this journey, find answers to all the questions below!

1. What does it mean to clone an individual person?
2. What are the three different types of cloning technologies? Discuss all of them.
3. What are the reasons for cloning?
4. What are the reasons against cloning?
5. Why are there risks in cloning humans?
6. What are some of the issues raised with regards to human cloning?
7. Do you know the timeline of the cloning technologies?

Explore, Enjoy and Learn What You Have Never Learnt Before!

Before you begin the tasks, take a multimedia tour on the basics to understand what is DNA and genes. Then, try out the interactive game and test below.

http://learn.genetics.utah.edu/content/begin/tour/ (Tour the Basics) http://www.guardian.co.uk/flash/0,5860,534450,00.html (Interactive guide to cloning)

http://learn.genetics.utah.edu/content/tech/cloning/clickandclone/ (Interactive- Click and Clone) http://learn.genetics.utah.edu/content/tech/cloning/cloningornot/ (Interactive – Is it Cloning or not?)

Process

Work in a group of three students. Your mission is to create a pamphlet on facts and issues on human cloning. Follow the steps closely and your group will achieve this goal easily!

Step 1: Discuss and select a role first. Student A is the pamphlet designer and co-writer, Student B is the graphic researcher and co-writer and Student C is the logo designer and co-writer of the pamphlet.

Step 2: Plan and organize your pamphlet to make it appealing. Add some interesting graphics and pictures. Conduct a research and gather information for the contents. Evaluate all the information gathered

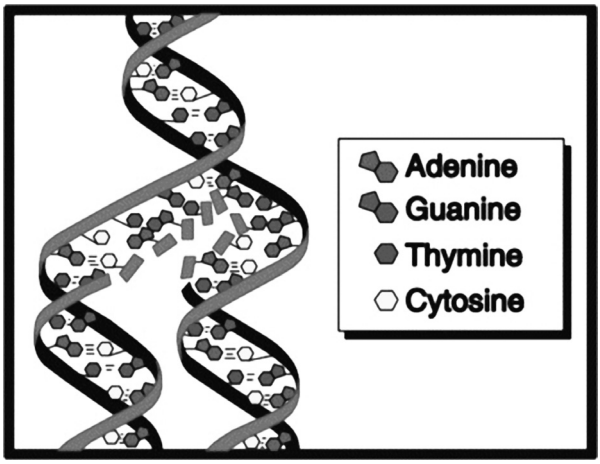
before it is written in the pamphlet. Contents can be based on the questions asked below:

- What is human cloning? Explain the cloning process.
- What are the three different types of cloning technologies? Discuss all of them.
- What are the pros and cons of human cloning?
- Why are there risks in human cloning?
- What are some of the ethical issues on human cloning?
- What is the future of human cloning? Discuss the history of cloning technologies.

Step 3: After reading and exploring all the pros and cons of the issues on human cloning, each member must decide and write an argumentative essay on 'Should human cloning be allowed?' Send your essay to your teacher by using email for evaluation and comments.

Unit 10

Human development



- **Speaking and Reading**

Artificial reproduction.

Pre- reading task.

Study the following phrases for expressing concession and contrast.

Concession	Contrast
Although they were rich, they were very unhappy. **I acknowledge/ accept** that he has worked hard but it is not enough. **I agree** but I have strong doubts about it. **I admit** I was wrong, **but I still think** we had a good chance to succeed. You shouldn't seem so surprised. **After all**, I didn't warn you. **It's all very well** saying you love children, but who will provide for them if we do have one. **Admittedly,** she put a lot of effort in, but it was all wasted.	I thought the party would be boring. **Quite the opposite,** it turned out to be fun. Everyway in Europe they use metric measures. **In contrast,** Britain still uses non- metric ones. **On the one hand,** it is impossible to reverse human knowledge; **but on the other (hand),** some scientific developments can result in disaster. You are mistaken to think that we'll do this work in a few days. **On the contrary,** it may take us a whole month.

What do you know about artificial reproduction? What are the positive and negative sides of it?

Do you agree with the following comments? Discuss them with other students.

- 'God is the giver of life not man.'
- 'God has given human beings the gift of scientific knowledge. We should use it.'
- 'We shouldn't interfere with nature.'

Now read the text. Has it changed your opinion?

Artificial reproduction.

Over the last few years medical science has advanced to such a degree that it is possible to create a normal baby with no fewer than five parents. One would be the woman who actually bears the child. Two others, its genetic parents, would supply the sperm and the egg, which are 'mixed' and then implanted as a living embryo in a surrogate mother's womb. Finally come the baby's 'real parents', the infertile couple who will take the baby home and call it theirs.

One technique is called AI (artificial insemination), when live sperm are injected into a woman's uterus at the time of ovulation. Another approach, transferring embryos from a female donor, has already been used for infertile women otherwise capable of carrying a child.

The world's first 'test tube' baby, Louise Brown, was born in July 1978 in England and since then the reproductive technologies have been big news in the West. The method used to conceive Louise Brown, *in vitro* fertilization (IVF), is done by bringing together ovum and sperm in a dish on a laboratory bench.

Once a viable embryo has been achieved it can either be deep-frozen and stored for later implantation, or it can be transferred straight into the mother's body.

The procedure presents serious health hazards for women. For ninety per cent of women IVF treatment means doctors appointments, hospital visits, tests, repeated examinations, surgery, tremendous anxiety, depression, disappointment, hope, despair – often without a baby at the end of it. But in any case reproductive technologies offer a last chance for childless women to hold a baby in their arms.

Comprehension check

1 Are the statements true or false? Write (T) if true and (F) if false. Correct the false ones.

1) A baby can't have more than two parents.
2) There are two methods of artificial reproduction.

3) The first test tube baby was born by transferring an embryo from a female donor.
4) An achieved embryo must be immediately implanted into woman's body.
5) Very often IVF appears to be unsuccessful.

2 Explain the following phrases in your own words.

a viable embryo
to present a hazard
to offer a chance
to advance to a great degree
a surrogate mother
to carry a child

- **Vocabulary**

1 Put one of the phrases in exercise 2 (from comprehension check) in the correct space. Make all the necessary changes.

1) Smoking _____ a serious health _____ even for passive smokers.
2) After the first trimester it was evident that pregnancy was problematic and that an _____ wasn't _____.
3) Artificial reproduction _____ a last _____ for childless women to hold a baby in their arms.
4) She was incapable to _____ _____ herself, so she decided to find a woman who would agree to be _____ _____ for her child.
5) His knowledge in medicine _____ to such _____ _____ that he was offered a job in one of the best clinics of the city.

2 Complete each space with an adjective formed from the noun on the left.

nouns	*adjectives*
1 despair	The patients grew increasingly _____.
2 infertility	An estimated one in ten couples is _____.
3 reproduction	_____ technologies have advanced in the last fifty years.
4 science	They are very _____ in their approach.
5 viability	Microbes and bacteria are the most _____ organisms.
6 anxiety	Today people feel really _____ about the future

Read the text about the stages of human life. Underline each of the stages in a human development.

Human Life Cycle.

A newborn baby cannot survive on its own. A baby depends on others for food, shelter, and protection.

During a lifetime, a person passes through stages. A baby grows through infancy, childhood, adolescence, adulthood, and old age followed eventually by death.

The greatest increase in growth in a person's lifetime occurs during infancy. For example, a baby's brain more than doubles in mass during the first year after birth. Teeth begin to show between five and ten months. At about eight months, a baby can sit unsupported. At ten months, the infant is strong enough to pull itself to a standing position. The ability to walk and talk begins to develop at about one year old.

Infancy is followed by childhood. The child's mental abilities continue to develop. The child learns to read and compute numbers. Muscle control and strength also increase.

At about the age of ten, the child enters puberty. Puberty is brought about by an increased output of hormones from the pituitary gland. From the beginning of puberty the child is able to reproduce. Adolescence is the stage of development that follows puberty when the child matures sexually and mentally.

The sex hormones affect the development of secondary sex characteristics. In a male, these include an increase in height, weight, muscles, and body hair. The larynx and vocal cords also enlarge causing a deepening of the male's voice. In a female, the menstrual cycle begins and the breasts develop. There is also an increase in height, body hair, and fat deposits on the legs and hips of the female. In both males and females, the sweat and oil glands in the skin become more active. This often results in facial skin eruptions called acne.

A person becomes an adult when the body is full-grown. The adult stage is marked by maturity. Maturity is full development of mind and body. The adult years may be the time for reproduction and protection of offspring. As adults become older, there is a gradual aging of tissues and organs. In women the ability to reproduce ends at menopause. The ovaries become smaller and no longer produce eggs. In men, sperm is produced throughout their lives. The average life span for humans is about 75 years.

Answer the questions:

1) What are the stages in a human development?
2) Describe changes that occur during infancy.
3) What changes occur in puberty?
4) What are the characteristics of a mature adult?

1 Homonyms

Homonyms are the words with the same spelling and pronunciation but different meanings.

a **last** chance
to **last** an hour

1Fill the pairs of gaps with the same word. Sometimes the word changes its form.
The words occur from the text about human life cycle.

1 She held a baby in her _____.
Police say the man is _____ and dangerous.

2 _____ of smallpox are becoming rare
Exhibits in museums are often displayed in glass _____.

3 She _____ little resemblance with her mother.
A crowd of people gathered around the cage with polar bears.

4 She decided to work for two Master's _____ - one in Physics, the other in Mathematics.
Water freezes at zero _____ Celsius.

5 _____ heals all wounds.
_____ how long it takes me to do two lengths of the pool.

6 What did he _____ by that remark?
It was _____ of you to eat all the food.

2 Think of two meanings for these words. Write sentences that illustrate the different meanings.

match	draw	cross	fine	fair	fit	suit
miss	mind	mark	sentence	point	plain	

2 Read the text and when you come to the boxes choose the sentence that best continues the text.

Aging healthfully.

Some people are concerned about aging. Aging is the period in life after physical growth ends. Aging begins to take place when a person reaches the age of 20.

Aging is inevitable.

Why aging begins is not known.

One theory states that after birth the body will continue to reproduce cells only a certain number of times. After that, the rate of

cell reproduction is slowed. These researchers believe this slowdown causes aging.

Another theory of aging states that that damage occurs to genes in the cells.

No other theories are yet known.

Genes are the part of a cell that contain a person's traits. Once a gene is damaged, it reproduces another damaged gene. The reproduction of these damaged genes is thought by some to cause aging.

Much research is devoted to the problem of aging.

Research shows that your future is determined by what you do now.

If you follow healthy habits now, you probably will be healthier as you age. And if you follow poor health habits, chances increase that you will have more health problems as you age.

LISTENING

Before you listen.

In pairs complete the following task. Students A strongly believe IVF is a good thing; Students B strongly believe the opposite. Change partners again and talk about your conversations.

T. 10 Listen to the passage and choose whether the statements below are true or false.

a.	A Vatican official hit a member of the Nobel Prize committee.	T / F
b.	The official said IVF is not in line with the way Christians should live.	T / F
c.	The official said an advantage of IVF was women could hire babies.	T / F
d.	The Pope believes IVF isn't good because it's unnatural.	T / F
e.	IVF almost always takes place inside a woman's body.	T / F
f.	Babies born via IVF are created inside test tubes.	T / F
g.	IVF accounts for around 10% of all babies born in the world.	T / F
h.	The world's first "test-tube baby" is still alive.	T / F

Listen again and fill in the gaps

Vatican officials _____ awarding of the Nobel Prize for Medicine to the pioneer of in-vitro fertilization, Dr Robert Edwards. They said the award to the British researcher was "_____" and went against all Christian teaching on procreation. Spokesman Monsignor Ignacio Carrasco de Paula told the ANSA news agency that IVF has led to "_____

like children born from grandmothers and mothers 'for hire'". He _____ "the great number of frozen embryos around the world, which at best are waiting to be transferred to wombs but will most probably _____ or dying". The current Pope Benedict XVI believes IVF is morally wrong because it replaced _____ between husband and wife.

In-vitro fertilization is _____ human egg cells by sperm outside a woman's womb. It created the world's first "test-tube baby" in 1978 _____ four million babies. IVF has changed the lives of millions of infertile couples who could not have children. The Nobel Prize committee said Professor Edwards' _____ brought "joy to infertile people all over the world". They added: "His achievements have _____ treat infertility, a medical condition afflicting a large proportion of humanity, including more than _____ worldwide." The first baby born via IVF, Louise Brown, 32, said the award was "fantastic news". She told reporters she was "so glad that one of the pioneers of IVF has been given the _____".

SYNONYM MATCH: Match the following synonyms from the passage.

1. officials	a. unintelligible
2 pioneer	b. by means of
3. procreation	c. method
4. incomprehensible	d. representatives
5. abandoned	e. hitting
6. process	f. dumped
7. infertile	g. innovator
8. afflicting	h. merits
9. via	i. reproduction
10. deserves	j. sterile

Discussion point.
What are some of the joys and problems of each age?
What is the happiest period of life?
Are you happy with your present age?
How do you feel about growing older?

Work in pairs. With which age or ages do you associate the following?

- nappies
- a pension
- wrinkles
- a satchel
- going bald
- going gray
- expecting a baby
- an inability to sleep
- an inability to wake up

wise
innocent
mature
being responsible
ambitious
naughty
absent-minded

Now read an extract from a Shakespeare play *As You Like It*. It is a famous speech, known as The *seven ages of man,* by a character called Jacques.
How the stages of a human development are described by Shakespeare?

"As You Like It" (by W. Shakespeare)

All the world's stage,
And all the men and women merely players:
They have their exits and their entrances;
And one man in his time plays many parts,
His acts being seven ages. At first the infant,
Mewling and puking in the nurse's arms
And then the whining school- boy, with his satchel
And shining morning face, creeping like snail
Unwillingly to school. And then the lover,
Sighing like furnace, with a woeful ballad
Made to his misstress' eyebrow. Then a soldier,
Full of strange oaths, and bearded like the pard
Jealous in honor, sudden and quick in quarrel,
Seeking the bubble reputation
Even in the cannon's mouth. And then the justice,
In fair round belly with good capon lin'd,
With eyes severe, and beard of formal cut,
Full of wise saws and modern instances*;*
And so he plays his part. The sixth age shifts
Into the lean and slipper'd pantaloon
With spectacles on nose and pouch on side,
His youthful hose well sav'd a world too wide
For his shrunk shank: and his big manly voice,
Turning again towards childish treble, pipes
And whistles in his sound. Last scene of all,
That ends his strange eventful history,
In second childishness and mere oblivion
Sans teeth, sans eyes, sans taste, sans everything

Glossary

mewling and puking crying and being sick

woeful sad

oaths swear words

saw saying or proverbs

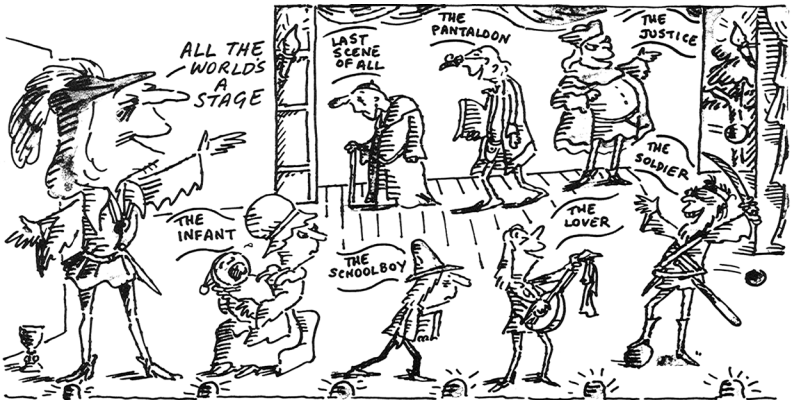
slipper'd with slippers on

hose kind of trousers

oblivion forgetfulness

sans without

- **Writing**
  Look at the picture and write the main idea of the poem in your own words.



Curriculum vitae

1 Read the following CV and try to write your own one.

33 Sayat-Nova st
Yerevan
Armenia
Phone 374 1 553246

David Gnuni

Personal Information	Marital status:	Single
	Nationality:	Armenian
	Age:	28
	Place of Birth:	Yerevan
Education	1983 -92	Secondary School #114, Yerevan
	1993 –8	Yerevan State University B.A Biology
	1998-2000	Post-graduate
Professional experience	April 2001 to present time……Working with disabled children in community care ……centre in York.	
	1998 –200l	Worked as a nurse at the ……children's hospital
Languages	Fluent Russian and English	
Interests and activities	Travel, cinema, working with children.	

Idiom Time

Body Idioms

All ears

Listen very attentively

To have cold shoulder

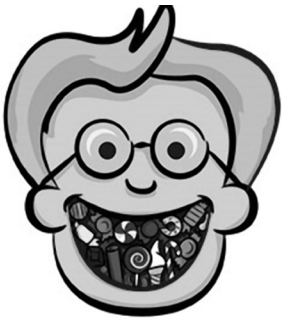
To pay no attention

Itchy feet

A strong desire to travel

Long arm of the law

The far -reaching power of authorities

Old hand	Sweet tooth
	
An experienced person	A great liking for sweet things

Fill in the blanks with one of the idioms.

1. She was _____ to find out where her husband had been the night before.
2. No wonder she's got _____. She's been working in the same office with the same people for more than twelve years.
3. The manager has given the _____ to our proposal to buy a new company car.
4. Our boss is an _____ in the car business, you can't cheat him with this broken engine
5. Stop this dirty business, the _____ will reach you some day.
6. She has a _____, but as she's rather fat, she must resist eating chocolate too often.

Case study

Human development

Introduction

Congratulations!! You are a proud new parent of a brand new baby! Apart from all the excitement and dirty diapers you are now responsible for guiding this new person through their critical developmental years. No easy task! Your job is to research and apply the ideas of the theorist that you believe to be the most influential to how we see child development today in terms of social and cognitive development. Then you must embark on the difficult task of applying this new found research to your parenting decisions. Good luck!!

Task

First Step: You need to name your baby!! Please get creative with the baby's last name by choosing a few letters from everyone's last name in your group. Then go to the website below to choose a name for your baby! http://www.yeahbaby.com/celebrity-baby-names/generator.php

Now that you have a baby boy or girl with a catchy name that I'm sure will be all the rage at school, you need to research and make an informed and insightful decision to how you are going to go about raising this baby to become a constructive member to society. Individually, as new mommies and daddies you will need to pick from the below theorists that have contributed to the understanding of how children develop. You will not be alone, you will be placed in an expert group to help guide your information to get a better understanding of your theorist and their theories. Then, you will become a cohesive parental group again, sharing what you have found with your fellow parents. As a parental group you are then to create a power point presentation displaying your decisions on how you are going to raise your child to meet their developmental needs

in terms of nursery set-up, toys, food, games, reading and discipline. You will need to justify and defend why you made the decisions you did and connect them to the theories you have learned about. You will then present your power point to the class. Have fun!

Process

You will be assigned one of these theories:

- Piaget and the Development of Thought
- Kohlberg's Stage Theory
- Mary Ainsworth and Attachment Theory
- Erikson's Stages of Personal Identity Development

FIRST: As a parent group, decide on your baby's sex and name.

SECOND: Individually, once you decide which group member will research each theorist, look at the websites below assigned to your theorist.

THIRD: Outline their theory and important information including criticisms.

FOURTH: Create a handout with your expert group (same theorist) and make a copy for each of your fellow parents.

FIFTH: Back in your parental group, educate your fellow parents on what you have learned pertaining to your theorist.

SIXTH: Together, construct how you are going to raise your child and what kind of environment you will raise him/her in on the biases of nursery set-up, games/ toys, and discipline for the first 5 years of your baby's life.

SEVENTH: Justify why you made the decisions you did.

EIGHTH: Connect your decisions to one of the theories studied.

NINTH: Create a PowerPoint to show the class your finished product outlining the above.

TENTH: Present to the class.

ELEVENETH: Evaluate your group member's participation.

Resources

Piaget:
http://www.learningandteaching.info/learning/piaget.htm
http://webspace.ship.edu/cgboer/piaget.html

Kohlberg:
http://faculty.plts.edu/gpence/html/kohlberg.htm
http://education.stateuniversity.com/pages/2150/Kohlberg-Lawrence-1927-1987.html

Ainsworth:
http://psychology.cse.edu/DuarteEdwardsMendoza%20AinsworthAttachment%202006/JoselineCurlin.htm
http://video.google.com/videoplay?docid=-3634664472704568591

Erikson:
http://www.muskingum.edu/~psych/psycweb/history/erikson.htm
http://www.learningplaceonline.com/stages/organize/Erikson.htm

Appendix

Texts for additional reading

The function of carbon dioxide in the atmosphere.

Every year there are changes in climate in different parts of the world. Some of these changes are due to natural causes. However, some climatic changes are caused by air pollution and these changes may increase. One kind of pollution results from burning oil and coal in transport and in factories.

If the pollution affects the level of carbon dioxide in the atmosphere, the results are likely to be serious. Carbon dioxide constitutes only a small part of the atmosphere. But it has an important function in maintaining the balance between radiation from the sun entering the atmosphere and radiation leaving the Earth. Some of the radiation is absorbed by the Earth and some is radiated back into the atmosphere. The carbon dioxide in the atmosphere prevents some of the radiation from leaving the atmosphere. Thus the heat remains in the atmosphere and carbon dioxide helps to prevent the temperature from the earth from falling.

If the proportion of carbon dioxide in the atmosphere is increased as a result of air pollution, the temperature of the atmosphere may rise. This may eventually cause the ice in the North and the South Poles to melt. If this happened, the sea level would rise and parts of the Earth would be flooded. The likelihood of this happening is remote, but the possibility exists.

There is also a fairly strong possibility that the dust level in the atmosphere will rise as a result of industrial pollution. This dust pollution will reflect sunlight back into the space. If this happens, less sunlight will reach the Earth and the temperature will fall.

Another danger comes from the destruction of the Earth's vegetation, such as the forests of Brazil, which are being cleared to make way for farmland and cities. Trees use carbon dioxide and their destruction may upset the balance of carbon dioxide in the atmosphere.

Climate change causes extreme changes to Antarctic lakes.

A 1 ^{0}C temperature increase has caused dramatic ecological changes to lakes in Antarctica, according to a 20- year study by the British Antarctic Survey (BAS). Signy Island, some 700km north-east of Antarctic Peninsula, has experienced some of the most rapid warming (2.5 ^{0}C) of anywhere on earth in the past 50 years. During the last 20 years the summer air temperature on Signy has risen by 1 ^{0} C, causing the lakes' ice free days to increase by a month between 1981 and 1995. This meant the temperature in the lake water rose by 0.2 –1.3 ^{0}C. Local sea temperatures remained the same.

With extra ice- free days, the lakes absorbed more solar energy and collected more nutrients from the meltwater flowing into them, changing their ecology. A ten- fold increase in phosphate has acted as a natural fertilizer, and there is now three times more chlorophyll from algae in the lakes than 20 years ago.

Professor Lloyd Peck of BAS said 'The lakes have not been contaminated by human or animal waste. Their pristine nature gives us a unique natural laboratory where we can identify changes undetectable in contaminated lakes.'

Bas's core science program Life *at the edge* examines Antarctic ecosystems, including microbial food webs, in order to see how species cope with environmental change.

Teenage smokers on 19m a week.

The proportion of children who smoke is increasing, with those aged under 16 consuming 19.35 million cigarettes a week, according to a new study.

Ten per cent of British children aged 11 to 15 were regular smokers in 2000, compared with 8 per cent in 1998.

In Armenia, the position is worse, with 15 per cent of children aged 12 to 15 smoking.

Some 16 per cent of British and 20 per cent of Armenian children said they smoked regularly or occasionally. The definition of regular smoking was at least one cigarette a week, but the self- confessed regular smokers lit an average of 53 cigarettes a week. A quarter of the regular smokers – 3 per cent of the sample of almost 9,000 pupils

from 309 secondary schools – smoked more than 10 cigarettes a day.

Saliva tests for cotinine, a chemical product of nicotine, among those smoking 10 or more cigarettes a day gave similar levels to those measured in adults. The tests proved that few children lied about their cigarette consumption.

The report said smoking habits of children had changed little since the mid- 1990s, despite an increasingly anti- smoking culture and a decade of health campaigns aimed at them.

David Pollock, director of Action for Smoking and health, said that the children's cigarette consumption represented an annual market of $100m.

"The figures published today are gravely disappointing but hardly surprising, given the complacent attitude of the government. They reflect the power of $100m of tobacco advertising – 50 times as much as the Health Education Authority has to spend on teenage smoking education." He said tobacco retailers should lose their licenses if found guilty of selling cigarettes to children.

Vitamins.

Food contains only minute quantities of the substances called vitamins, but they are vital for good health. For example, if you eat a diet of meat, bread, sugar and fat, you may become ill with a disease called scurvy. This is caused by a deficiency in vitamin C, which is found in fruit and vegetables.

About fifty different vitamins have been identified, and a deficiency in many of these can lead to illness. Vitamin A is most important for good eyesight, but it is also important for general good health. Liver contains a considerable amount of vitamin A, but vitamin A is also found in fish, meat, milk, butter, some fruits and vegetables.

Vitamin B in fact consists of twelve different chemicals, which are found in eggs, cheese, butter, wholemeal flour and vegetables. If a person has an inadequate amount of vitamin B in his diet, this may affect his whole body, particularly the skin, the nervous system and the heart. Deficiency in vitamin B results in a disease called beri- beri.

Vitamin C prevents scurvy and helps to heal injuries. Some doctors believe that large quantities of vitamin C help people to avoid colds. Fruits and uncooked vegetables are rich in vitamin C, but when they

are overcooked, or left for a long time they lose most of their vitamins.

Vitamin D is essential for growth of bones and teeth and is found in fish, liver, oil and milk. Vitamin D is the only vitamin, which the body can make for itself, but it can do this if there is sufficient sunlight. A lack of both sunlight and vitamin D can result in a disease called rickets, which cause bones to soften and to be deformed.

Vitamins are only needed in very small quantities. A quantity sufficient for a whole life would weigh only a quarter of a kilogram, but a well-balanced diet will provide an adequate amount of vitamins.

Seal and penguin food shortages

Seal and penguin populations in the Antarctic sometimes suffer catastrophes during breeding because of natural variations in the food chain rather an overall decline in their food.

When these catastrophes strike many seal pups starve, and penguins abandon their nests, eggs and chicks. Antarctic seals and penguins feed mainly on krill, a highly abundant small shrimp. If the krill population declines this has a gradual but increasingly magnified effect on the seals and penguins.

If the krill population is already at a low density, even quite small changes in its abundance can have a devastating effect on penguin and seal breeding success. In contrast, if there are high densities of krill, similar changes have no effect.

This discovery published recently in Journal of Animal Ecology by Professor Ian Boyd and Alistair Murray suggests we should expect to see the occasional catastrophe as part of the natural variation in the oceans. But if they become more frequent they could signal an overall decline in the food penguins and seals eat.

In other parts of the world fisheries might be implicated in taking food from seals and penguins but in the Antarctic the fishery for krill is so small that this is unlikely.

A key to learning.

Breaks. Any period of study or learning is best broken down into smaller chunks, with short breaks between each session. The actual size of each chunk will depend upon the type of material being studied.

In practice, it is found that somewhere between fifteen and forty- five minutes is the best. If the chunk becomes too small, there is not and internal coherence to gain a proper understanding of a material, and if it is too large, the full benefit of taking breaks is lost.

As to the question of how long the break should be, something of the order of five to ten minutes is the best.

During the breaks themselves you should take a complete rest from the type of the work under study. If you merely switch to something similar, not only is the mind given a real break, but numerous interfering associations will be made that will impede later recall. The best thing to do is to relax both mentally and physically and to take some fresh air. The rest also helps the mind to consolidate and organize the information gained, and it is important to let it get on with this in its own way.

The von Restorf Effect. This can be used to improve memory in a number of ways. Whenever you want to remember something, deliberately make the idea stand out.

- Exaggerate it. The more bizarre an idea is, the more arousing it is, and the more clear will be the memory.
- In writing and note- taking, use outlining, bold print, color, and anything else that will make important points stand out.
- When reading underline important points.
- Everything is unique. Emphasize its uniqueness in your mind, how it is different from everything else.

How well do you know your world?

1 Why do women live longer than men?

Women generally live about six years longer than men. Evidence suggests that boys are the weaker sex at birth, which means that more die in infancy. Also women do not have as much heart disease as men. In terms of lifestyle, men smoke more than women and thus more die of smoking- related diseases. They drink more and are more aggressive in behavior, particularly when driving cars, so they are more likely to die in accidents. Also, they generally have more dangerous occupations.

Historically, women died in childbirth and men in wars. Hence nuns and philosophers often lived to great ages. Now childbearing

is less risky and there are fewer wars. The country with the highest life expectancy is Japan, where the average age for men is 76 and for women 82.

2 Will there ever be a cure for the common cold?

Perhaps, but not yet. The big challenge facing scientists trying to rid mankind of this misery is finding a drug that can combat the huge and ever- changing variety of cold viruses. Researchers are looking for features that all such viruses share. Whichever drug company comes up with something is guaranteed to make a fortune.

3 Why do we sleep?

On average we spend a third of our lives sleeping, but no one really knows why. The most popular is that sleeping gives the body and brain a chance to recover from the stresses of the day. But beyond this vague statement, we don't know what this recuperation consist of. Warm-blooded species, including humans, birds, and mammals, seem to need more sleep than cold- blooded creatures such as fish or reptiles, so there is a possibility that we sleep in order to save energy. Sleep deprivation produces hallucinations.

4 Why is yawning infectious?

This is a tough one. No one even knows what purpose yawning serves at all. But we do know that fatigue, boredom, and anxiety can trigger off a yawn.

Like crying and laughing, yawning is a variant of normal breathing. Yawning is a reflex action, not under conscious control. The mouth opens wide and you take a longer, deeper breath than usual. Yawning momentarily raises the heart rate, forcing more blood to the brain. One theory is that yawning makes you more alert by making you breathe in more.

Yawning is not infectious in the clinical sense of the world.

5 Why are some people left – handed?

About ten per cent of the population is left– handed, and it seems to run in families, the cause, therefore, seems obvious: genetics. However, identical twins, who have identical genetic blueprints, aren't necessarily both left–handed or right– handed. This would appear to

disprove the theory that being left- handed is inherited.

Even at birth, most babies tend to move one arm, usually the right, more than the other. Some scientists believe that the use of left hand or right hand is a result of the baby's environment. Most children can be trained to use the right hand for any activity.

The structure and functions of systems in the human body

The human body is made up of a number of different systems. Each system has a separate function, but some work together. One system is the skeleton, which serves to support the body and protect the internal organs. The respiratory system enables us to breathe and take oxygen into the blood, which moves around the body by means of the circulatory system.

The endocrine system consists of various glands, such as the thyroid, sex and adrenal glands. The function of these glands is to secrete chemicals, known as hormones, into the blood. These hormones control various processes in the body, such as growth, sexual activities and digestion. The nervous system controls the other systems and enables human beings to think.

Each system is made up of organs. The lungs, for example, are part of the respiratory system. The heart is an organ in the circulatory system. The liver functions as part of the digestive system and other systems.

Every organ is composed of several kinds of tissue. Epithelial tissue, which includes the skin, forms a covering over organs. Connective tissue supports and holds together parts of the body and includes bones and cartilage. Other types of tissue include nerve tissue and body tissue.

All tissue consists of cells. These are so small that they are measured in thousandths of a millimeter and can only be seen with a microscope. Each cell is covered with a thin membrane which surrounds a nucleus, a jelly- like substance, called cytoplasm. This in turn contains minute particles, each with its own special function.

Audio scripts

T1*The Vanishing Invention*

In 1998, a Valencian professor made an amazing claim. Professor Antonio Cervilla discovered how to use water as a substitute for petrol.

The scientist said that you could drive from Bilbao to Valencia on just half a liter of water. His invention uses a molybdenum compound to break down water into hydrogen and oxygen. Unlike other methods no electricity is required and the reaction happens at atmospheric temperature.

This impressive technology is based on the way plant enzymes break down water. The use of molybdenum is the perfect choice because, although rare, it is cheap and found all around the planet.

Since the claims were made, nothing more has been heard about this fabulous technology. There is no explanation for the disappearance anywhere on the internet, apart from a list of similar inventions which have also vanished. An inventor from the Philippines called Daniel Dingel developed a water- fuelled car but was arrested at the age of 82 and sentenced to 20 years in prison.

If this technology were to become widely available, it would prove disastrous for petrol station owners and would also save the planet from the impending environmental catastrophes being caused by pollution.

T2 Weather forecast

1. Welcome to the weather forecast. Now, let's see what the weather is like today.

2.In the north of the country it's very windy and cold. There is a chance of some rain too.

3. The temperature is around 10 degrees centigrade.

4.In the east it's rainy all day, I'm afraid. There may be a thunderstorm in the afternoon. The temperature is a bit higher, at around 13 degrees.

5. In the west and middle of the country the weather is dry but cloudy.

6.The south of the country has the best weather today. It's cloudy most of the time but sunny this afternoon.

T3 Alcohol

Many people all over the world enjoy alcoholic drink, such as wine or beer, during dinner. Sometimes people raise a glass of alcohol to celebrate a wedding or a birthday. And having drinks after work with friends and co-workers is called "happy hour". All these situations are considered "social drinking" because they happen at social events. But when does "social drinking" become problem drinking? According to The WHO alcohol abuse kills 3.3 million people each year. The report also says alcohol use can increase the risk of developing more than 200 diseases, including some cancers. And, it says alcohol abuse can put the people at greater risk of infectious diseases. Shekhar Saxena is a WHO official. She says the organization is concerned about drinking among people under the age of 19. She says it is more concerned about what is called "binge- drinking", an extended period of heavy drinking. She says research found that 16 percent of drinkers over the age of 15 are binge-drinkers. The WHO report also found that the highest rates of alcohol-linked deaths are in Europe. Finally the report says less alcohol is used in Africa than in Europe. But, it says the health effects are worse in Africa because of a lack of social support systems and health care. The WHO says countries can protect people from alcohol abuse. Possible measures include raising alcohol taxes and the legal drinking age. Controlling the marketing of alcoholic drinks could also reduce abuse problems

T4 Plastic surgery

Would you like to change your face and body? Would you likemovie star looks? A lot of people want to do this. They pay money to go to a cosmetic surgeon and change their appearance. The most common operation we call a nose job. People who are unhappy with their nose have it reshaped. Other people want their wrinkles to disappear to make themselves look younger. People also go under the knives and have things made bigger or smaller. I think this is a waste of money . I'm not the best-looking person in the world but I would never consider plastic surgery – even if it was free. Some people have so many operations they end up looking like they're made of plastic. I'd rather stay looking human.

T5 Animals

The world's endangered species are in danger from the Internet. Online shoppers are buying huge numbers of exotic animals. This is another nail in the coffin for many creatures already threatened with extinction. Poachers, collectors wanting stuffed rhino heads and Chinese medicine already threaten thousands of species. The International Fund for Animal Welfare (IFAW) wrote a report called "Caught In The Web - Wildlife Trade On The Internet". It found thousands of rare animals for sale in its one-week Web search.

i. The report is the tip of the iceberg. Experts value the illegal global animal trade at billions of dollars a year. The World Wide Web makes the situation worse. "Trade on the Internet is easy, cheap and anonymous. The result is a cyber black market where the future of the world's rarest animals is being traded away," said IFAW's Phyllis Campbell-McRae. She also warned: "Trade in wildlife is driven by consumer demand, so when the buying stops, the killing will too. Buying wildlife online is as damaging as killing it yourself."

T6 Memory

Eating fish every week may keep our brain more active during our older years. This is the conclusion of research conducted by the Rush University Medical Center in Chicago. The study found that older people who eat fish regularly have quicker and better memories. Over a lifetime of eating fish, people could be three to four years mentally younger in age. Lead researcher Martha Clare Morris said: "We found that people who ate one fish meal a week had a 10 percent slower annual decline in thinking....People who rarely eat fish have a…faster decline in their thinking ability over time."

Morris's team collected information on the diets and memory loss of 6,158 people aged 65 and older. She concluded: "Eating fish may help to slow people's decline in thinking ability as they age." She thinks several fatty acids contained in fish may help the brain's development. Eating fish has previously been associated with a lower risk of developing Alzheimer's disease or having a stroke. Oily fish, like salmon and tuna, are a rich source of the acids. The report on the benefits of consuming fish appears in the October 10 online issue of the Archives of Neurology.*

T7 Brain

A study by the USA's Northwestern University provides biological evidence that people who are bilingual have a more powerful brain. Drs Viorica Marian and Nina Kraus investigated how bilingualism affects the brain. They found that studying another language «fine-tunes» people's attention span and enhances their memory. In particular they discovered that when language learners attempt to understand speech in another language, it activates and energises the brainstem – an ancient part of the brain. Professor Kraus stated: «Bilingualism serves as enrichment for the brain and has real consequences when it comes to…attention and working memory.»

Professor Marian explained why studying and learning another language was so beneficial for the brain. She said: «People do crossword puzzles and other activities to keep their minds sharp, but the advantages we've discovered in dual language speakers come automatically simply from knowing and using two languages.» She added: «It seems that the benefits of bilingualism are particularly powerful and broad, and include attention, inhibition and encoding of sound.» She said bilinguals were better listeners because they are «natural jugglers» of sound. She said: «The bilingual juggles linguistic input and, it appears, automatically pays greater attention to relevant versus irrelevant sounds.»

T8 Inventions

A Brazilian inventor has come up with a new gadget that converts your breath into electricity. This means breathing has become a source of renewable energy – at least while you are alive. Joco Paulo Lammoglia, from Rio De Janeiro, won the Red Dot design award for his AIRE device. His invention uses the wind flow created by breathing and changes it into energy that can power mobile phones and iPods. Tiny turbines in the AIRE charger create the electrical power from your breath. The device is worn like a mask and can be used while exercising or even when sleeping. Mr Lammoglia hopes his new creation will help protect the environment.

Lammoglia explained how useful he hopes the AIRE will become. He said: "I hope to bring the concept into production and reduce the carbon footprint. It can be used indoors or outdoors, while you're

sleeping, walking, running or even reading a book." He also said his invention encouraged people to exercise as well as saving energy and the environment. He explained why he thought the AIRE was so useful, saying: "Though many of our modern gadgets offer benefits, they tend to use a high amount of electrical energy. Harnessing energy from human activities and transforming it into electricity is possible and is a great solution." The product is not yet on sale but is sure to be a big seller when it does hit the shelves.

T9 Cloning

American scientists have, for the first time, taken stem cells from human embryos that are genetic copies of living people. The goal is to create better treatment for disease. But the work has raised ethical concerns about cloning, or making genetic copies of people. It is illegal to clone human beings in more than 12 states. Some medical researchers are carrying out what is called therapeutic cloning to try to fight disease. Still, even that method is banned in seven states. One state where therapeutic cloning is not banned is Oregon. Researchers at Oregon Health and Science university in Portland were able to put human DNA into modified human eggs. They produced embryos that were genetically the same as the people who donated their DNA. The researchers then took stem cells from the embryos. These cells are called " master cells". The scientists know how to use chemicals to cause master cells to develop into any tissue in the body. The idea is that doctors could use tissue created this way to replace diseased organs. The new body tissue would be a genetic match of the person receiving it. And there would be no danger that the patient's body would reject the tissue. That can happen with normal transplants. Shoukrat Mitalipov let the study which involved more than 20 researchers. The scientists believe the stem cells can give doctors new way to treat Parkinson's disease, a degenerative movement disorder. Scientists believe they could use the DNA from a skin cell of someone with Parkinson's disease to create a personalized treatment.

T10 IVF

Vatican officials have hit out at the awarding of the Nobel Prize for Medicine to the pioneer of in-vitro fertilization, Dr Robert Edwards.

They said the award to the British researcher was "completely out of place" and went against all Christian teaching on procreation. Spokesman Monsignor Ignacio Carrasco de Paula told the ANSA news agency that IVF has led to "incomprehensible situations like children born from grandmothers and mothers 'for hire'". He expressed his horror at "the great number of frozen embryos around the world, which at best are waiting to be transferred to wombs but will most probably end up being abandoned or dying". The current Pope Benedict XVI believes IVF is morally wrong because it replaced the natural sexual union between husband and wife.

In-vitro fertilization is the process of fertilizing human egg cells by sperm outside a woman's womb. It created the world's first "test-tube baby" in 1978 and has since created four million babies. IVF has changed the lives of millions of infertile couples who could not have children. The Nobel Prize committee said Professor Edwards' pioneering work had brought "joy to infertile people all over the world". They added: "His achievements have made it possible to treat infertility, a medical condition afflicting a large proportion of humanity, including more than 10% of all couples worldwide." The first baby born via IVF, Louise Brown, 32, said the award was "fantastic news". She told reporters she was "so glad that one of the pioneers of IVF has been given the recognition he deserves".

Glossary

acid [ˈasid] (n) (chemistry) – any of a class of substances containing hydrogen, that are usu. sour and can often destroy things they touch.

acne [ˈakni] (n) a skin condition, common among young people, that produces a lot of red spots on the face and neck.

adolescence [ˌadə́lesns] (n) – the time in a person's life when he or she develops from a child into an adult.
Derived words: adolescent (adj)

adult [ə́dʌlt] (adj) – grown to full size or strength; mentally and emotionally mature
Derived words: adult (n), adulthood (n)

affect [ə́fekt] (v) to have an influence on sb/sth; to produce an effect on sb/sth.
Derived words: affecting (adj)

ageing [ˈeidʒiŋ] (n) – the process of growing old or maturing.

animal kingdom (n) – natural world of animals.

anxiety [ahˈzaiəti] (n) – a nervous feeling caused by fear that sth bad is going to happen; worry.
Derived words: anxious (adj), anxiously (adv)

artificial [ˌaːtiˈfiʃl] (adj) – made by human skill; produced by humans; not natural.

behavior [biˈhivjə] (n) – the way sb acts, esp. towards other people.

blood [blʌd] (n) – the red liquid flowing through the body of people and animals.

blood clot (n) – a lump formed from blood when it is exposed to the air.

brain [brein](n) – the organ of the body inside the head that controls thought, memory and feeling.

breath [breθ] (n) – the air taken into lungs and sent out from the lungs.

breathe [briːð] (v) – to take air into lungs and send it out again.

calf [kaːf] (n) a young animal of certain species e.g. a whale or an elephant

cancer [ˈkansəː] (n) an abnormal growth of cells in the body which often causes death.

cause [kouːz] (n) – sth that produces an effect; a person or thing that makes sth happen.
Derived words: cause (v)

cavity [ˈkaviti] (n) an empty space within sth solid, e.g. a hole in tooth: *the abdominal/nasal/oral cavity.*

cell [sel](n) – a usually microscopic structure containing the basic structural unit of all organisms.

chicken pox (n) – a disease, esp of children, with mild fever and lots of red spots on the skin.

clone [klon] (Greek klon, twig.) (v) – 1. to make multiple identical copies of an organism
2. to reproduce or propagate asexually, to produce a copy of, imitate
Derived words: cloning (n), clone (n), clonal (adj)

conscious [ˈkonʃəs] (adj) – 1 knowing what is going on around one because one is able to use one's senses and mental powers.
2 (of actions, feelings, etc.) realized or controlled by oneself.
Derived words; consciously (adv), consciousness (n)

contract disease (v) – to develop or catch an illness.

crucial [ˈkruːʃl] (adj) – very important, esp for its effect on sth.
Derived words: crucially (adv)

cure [kjuəː] (v) to treat an illness.
Derived words: cure (n)

damage [ˈdamidʒ] (n) – harm caused to sth, making it less attractive.
(v) – to cause damage to sth.
Derived words: damaging (adj)

danger [ˈdeindʒəː] (n) – a chance of suffering damage, loss, injury, etc.

Derived words: dangerous (adj), dangerously (adv)

deprive [di′praiv] (n) – take sth away from sb/sth; to prevent sb/sth from enjoying or using sth
Derived words; deprivation (n), deprived (adj)

despair [diśpeə:] (n) the state of having lost all hope.
Derived words: despair (v), despairing (adj)

deteriorate [di′tiəriəreit] (v) – to become worse in quality or condition
Derived words: deterioration (n)

disappoint [ˌdisə́point] v) – to fail to be or do sth as good, interesting, etc, as was expected.
Derived words: disappointed (adj), disappointing (adj)

discover [diskʌvə:] (v) – to learn or find out a piece of information
Derived words: discovery (n), discoverer (n)

dissolve [di′zolv] (v) (of a liquid) – to make a solid become liquid.

drug [drʌg] n) – 1 a substance used as a medicine or in medicine.
2 a substance that stimulates the nervous system, esp one that is addictive eg heroin, cocaine.

endangered species – plant and animal species that are in immediate danger of extinction.

environment [eńvaiərənmənt] (n) – the air, water, minerals, organisms, and all other external factors surrounding and affecting a given organism at any time.
Derived words: environmental (adj)

examine [eg′zamin] (v) – to look at sth/sb carefully or in detail in order to learn sth about or from it/them; to inspect sth/sb closely.

experience [ekśpiəriens] (n) – the process of gaining knowledge or skill over a period of time through seeing and doing things rather than through studying.
Derived words; experience (v), experiential (adj)

famine [′famin] (n) – a time when there is very little food in a region.

fatigue [fə́ti:g] (n) - the condition of being very tired, usu because of

hard work or exercise.
Derived words: fatigued (adj)

fertility [fəːˈtiliti] (n) – the ability to produce offspring, power of reproduction.
Derived words: fertile (adj), infertile (adj), fertilize (v), infertility (n)

flu [fluː] (n) – (also *fml* **influenza**) an infectious illness like a bad cold, causing a high temperature, pains and weakness.

fungus [ˈfʌŋgəs] n) (pl **fungi** [2föhgai]) – any of various types of plant without leaves or flowers and containing no green coloring. Fungi usually grow on other plants or on decaying matter.

gene (n) - a hereditary unit that occupies a specific location on a chromosome and determines a particular characteristic in an organism.
Derived words: genetic (adj), genetically (adv)

genetics [dʒiˈnetiks] n) – the branch of biology that deals with the principles and mechanisms of heredity.

genome (n) – a full set of chromosomes with all its genes.
Derived words: genomic (adj)

hangover [ˌhaŋˈouvəː] (n) – unpleasant physical symptoms experienced after drinking too much alcohol.

hazard [ˈhazəd] (n) – a thing that can be dangerous or cause damage; a danger or risk.
Derived words: hazardous (adj)

heart attack (n) – a sudden illness in which the heart beats violently causing great pain and sometimes death.

hemisphere [ˈhemisfiəː] (n) 1 a half of the earth
2 (anatomy) either half of the brain.

herd [həːd] (n) – a number of animals feeding or staying together; *a herd of cows/deer/elephants*

horn [hoːn] (n) – a hard pointed growth on the heads of eg cattle or deer.

identical twins – ones who originate by the division of a single fertilized egg.

implant [imˈplaːnt] (v) – to insert tissue, etc into a part of the body.
Derived words: implant (n), implantation (n)

include [inˈkluːd] (v) 1 to have sb/sth as part of a whole.
2 to make sb/sth as part of a larger group or set.
Derived words: including (prep), inclusive (adj)

infancy [ˈinfənsi] (n) – the state or period of being a very young child.

inherit [inˈherit] (v) – to receive from one's parents by genetic transmission.
Derived words; inheritance (n), heredity (n), hereditary (adj)

injury [ˈindʒəri] (n) – a physical harm to a person or an animal.
Derived words: injure (v)

inspiration [ˌinspiˈreiʃn] (n) – the process of having one's mind or creative abilities stimulated.
Derived words: inspire(v), inspirational

irritate [ˈiriteit] (v)1 (biology) to cause discomfort to a part of the body; to make sth sore.
2 to make sb angry, annoyed.

life expectancy (n) – the number of years that a person is likely to live.

life span (n) – the average or maximum length of time an organism, a material, or an object can be expected to survive or last.

liver [ˈlivəː] (n) a large organ in the body that produces bile and cleans the blood.

lung [lʌŋ] (n) – either of the two breathing organs in the chest of humans and many other animals.

mammal [ˈmaml] (n) – any of he class of animals that give birth to live babies and feed their young on milk from the breasts
Derived words: mammalian (adj), mammary (adj)

mature [mə́tjuəː] (adj) – a fully grown or developed in mind or body
Derived words: maturely (adv), maturity (n), mature (n)

medicine [ˈmedsin] (n) – 1 the science of preventing and curing

illness and disease.
2 a substance, esp. a liquid, taken through the mouth, used in curing illness
Derived words: medicinal (adj)

memory [ˈmeməri] (n) – an individual person's power to remember things.

mucus [ˈmjuːkəs] (n) a sticky wet substance in the nose.

nature [ˈneitʃəː] (n) (biology) – the whole universe and every created, not artificial, thing.
Derived words: natural (adj), naturally (adv)

nutrient [ˈnjuːtrijənt] (n) – a substance that helps a living thing to grow.

nutrition [njuːˈtrʃn] (n) – the process of providing and receiving food necessary for health and growth

ovum (n) – (*p*l ova) a female cell capable of developing into a baby when fertilized by male sperm.

oxygen [ˈoksidʒən] (n) – a chemical element; a gas without color, taste or smell, which is present in the air and necessary for all forms of life on earth.

pollute [pǝ́ljuːt] (v) – to make sth dirty or no longer pure, esp by adding harmful or unpleasant substances to it.
Derived words: pollution (n), pollutant (n), polluter (n)

premature [ˌpremǝ́tjuə] (adj) – happening before the proper or expected time.
Derived words: prematurely(adv)

prone [proun] (adj) - likely to suffer from, do or get sth.

recall [riˈkoːl] (v) – to bring sth back into mind; to remember sth.

recover [riˈkʌvəː] (v) – to return to a normal state of mind, health, strength, etc.
Derived words: recovery (n)

reproduce [ˌriːprǝ́djuːs]]v) – (biology) to generate (offspring) by sexual or asexual means.
Derived words: reproduction (n),reproductive (adj)

rescue [ˈreskjuː] (v) – to save or bring away sb/sth from a dangerous or harmful situation.
Derived words: rescue (n), rescuer (n)

research [riˈsəːtʃ] (n) – careful study or investigation, esp in order to discover new facts or information.
Derived words: research (n), researcher(n)

resist [riˈzist] (v) to use force in order to prevent sth happening or being successful; to oppose
Derived words: resistible (adj), irresistible (adj), resistance (n)

retain [riˈtein] (v) – to keep sth; to hold or contain sth.
Derived words: retaining (adj)

science [ˈsaiəns] (n) – the study of the structure and behavior of the physical and natural world and society, esp. through observation and experiment.
Derived words; scientist (n), scientific (adj)

sensitive [ˈsensitiv] (adj) 1 easily offended or emotionally upset.
2 easily hurt or damaged
Derived words: sensitivity (n), insensitive (adj), sensitively (adv), sensitize (v)

side effect (n) (often plural) – a secondary, usu unpleasant, effect of a drug, etc.

skin [skin] (n) – the outer covering of the body of a person or animal.

skin eruption (n) – the process of appearing spots, etc on the skin.

skull [skʌl](n) – the bone structure of the head which protects and encloses the brain.

strand [strand] (v) to cause esp. a boat, fish or whale to be left on the shore and unable to return to the sea.
Derived words: stranding (n), stranded (adj)

substance [ˈsʌbstəns] (n) 1 a particular type of matter.
2 real physical matter that can be touched, not just seen, heard or imagined.

suffer [ˈsʌfə] (v) – to feel pain. discomfort, sorrow, etc.
Derived words: sufferer (n), suffering(n), sufferings (n)

surgery [ˈsəːdʒəri] (n) – treatment of injuries or diseases that involves cutting or removing parts of the body.
Derived words: surgical (adj)

surrogate mother – a woman who is paid to bear a child for another woman, either through artificial insemination by the other woman's husband, or by carrying until birth the other woman's surgically implanted fertilized egg.

survive [sə́vaiv] (v) – to continue to live or exist usu in spite of nearly being killed.
Derived words: survivor (n), survival(n)

tadpole [ˈtadpoul] (n) – the form of frog or toad at the stage when it lives under water and has gills and a tail.

test-tube baby – a baby developed from an egg that was fertilized outside the body and then implanted in the uterus of the biological or surrogate mother.

tissue [ˈtisjuː] (n) – (biology) an aggregation of morphologically similar cells and associated intercellular matter acting together to perform one or more specific functions in the body. There are four basic types of tissue: muscle, nerve, epidermal, and connective.

treatment [triːtmənt] (n) – a thing done to relieve or cure an illness or correct the problem.

ulcer [ˋʌlsəː] (n) – a sore area containing poisonous matter on the outside of the body or on the surface of an internal organ.
Derived words: ulcerate (v), ulceration (n)

universe [ˈjuːnivəːs] (n) – everything that exists, including the earth, the stars, the planets, space, etc: a system of stars, planets, etc.

wrinkle [ˈriŋkl] (n) – a small fold or line in the skin, esp. caused by age
Derived words: wrinkle (v), wrinkled (adj), wrinkling (n), wrinkly (adj)

yawn [joː n] (v) – to take a deep breath with the mouth wide open, usu when one is tired or bored.
Derived words: yawn (n), yawning (n)

YEREVAN STATE UNIVERSITY

M. Apresyan, D. Bagiryan

a NEW GLIMPSE INTO SCIENCE

ՀԱՅԱՑՔ ԴԵՊԻ ԳԻՏՈՒԹՅՈՒՆ

(3-րդ վերամշակված հրատարակություն)

Համակարգչային ձևավորող՝ Կ. Չալաբյան
Կազմի ձևավորող՝ Ա. Ստեփանյան
Հրատ. խմբագիր՝ Մ. Աստվածատրյան

Չափսը՝ 60x84 $^{1}/_{16}$: Տպ. մամուլը՝ 11,625:
Տպաքանակը՝ 200 օրինակ:

ԵՊՀ հրատարակչություն
ք. Երևան, 0025, Ալեք Մանուկյան 1

ՀՐԱՏԱՐԱԿՉՈՒԹՅՈՒՆ
ԵՐԵՎԱՆ 2015