LIETUVOS KARO AKADEMIJA

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TEKSTAI KARINE TEMATIKA ANGLŲ KALBA

Mokomąją knygą "Tekstai karine tematika. Anglų kalba" parašė Lietuvos karo akademijos Filologijos katedros vedėja Genovaitė Laugalienė ir šios katedros vyr.asistentė Milda Mironaitė.

PRATARMĖ

Šioje mokomojoje knygelėje pateikiama medžiaga susijusi su karių gyvenimo realijomis. Jos tikslas - padėti skaitytojui išmokti ir įtvirtinti leksines bei gramatines struktūras, padedančias kariams bendrauti anglų kalba. Knygelėje taip pat mokoma skaityti literatūrą karine tematika su žodynu.

Knygelė pirmiausia skiriama LKA antros pakopos karininkams. Be to, ją pravartu turėti visos krašto apsaugos sistemos kariams bei dalyvaujantiems programoje "Partnerystė taikos labui".

SAMUEL COLT'S GUN

As a 12 year old boy, would you rather have read about the effects of gun powder or obtained a recipe describing how to make some and try it in a gun? Of course, most twelve-year-old boys would rather have tried it, as Samuel Colt did. Although Sam's father was sympathetic with his son's interest in guns and gunpowder, he sometimes thought that he would rather have sent his son to learn some trade. So at the age of 16, Samuel Colt became a sailor, which gave him long hours to think about guns and also make drawings of the gun he dreamed of that would shoot more than one shot without being reloaded. He made carvings from wood but knew that the real gun would have to be made of steel. In spite of many setbacks and after many tries, the Colt repeater was perfected. In other words, Samuel Colt succeeded where other men had failed because he didn't give up on his dream.

Vocabulary Notes

would rather - labiau mėgti, teikti pirmenybę
gun powder - parakas
obtain - gauti
recipe - receptas
although - nors
sympathetic - palankus
trade - prekyba, amatas
load - užtaisyti (šautuvą)
carving - drožinys, raižinys
setback - kliūtis
repeater - dėtuvinis ginklas

perfect - tobulinti

succeed - pasisekti

fail - nepasisekti

give up on - nusivilti

Grammar

1. would rather (I'd rather)

   E.g. Most twelve-year-old boys would rather have tried it.

   "Shall we go by train?" "I'd rather (go) by car."

   I'm tired. I'd rather not go out tonight.

2. Perfect Infinitive: have done/cleaned/seen, etc.

   E.g. He would rather have read about the effects of gun powder.

   You should have cleaned the house.

   He could have called me.

Ex.1. Paraphrase the underlined words or word combinations:

1. the effects of gun powder;

2. his father was sympathetic with his son's interest in guns;

3. which gave him long hours to think about guns;

4. shoot more than one shot without being reloaded;

5. in spite of many setbacks, his repeater was perfected;

6. he didn't give up on his dream.

Ex.2. Complete the sentences:

1. "Shall I tell Ann the news?" "No, I'd rather....."

2. Do you want me to go now or would you rather.....

3. Do you want to go out this evening or would you rather.....

4. This is a private letter addressed to me. I'd rather you.....

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5. It's quite a nice house but I'd rather.....

6. "Do you mind if I turn on the radio?" "I'd rather you ..... I'm studying."

7. "Would you have some coffee?" "I'd rather....."

Ex.3. Complete the sentences using the Perfect Infinitive:

1. If you hadn't called me, I wouldn't (know) anything.

2. You seem (lose) weight.

3. You should (thank) him for his present.

4. You could (meet) him and (discuss) it.

5. He was lucky. He could (hurt) himself.

6. The test was really difficult. I'm sure I couldn't (pass) it.

7. He didn't hear when we arrived. He must (be) asleep.

8. "I can't find my money." "You might (leave) it in the shop."

9. I would rather (stay) home if I had known the play would be so boring.

10. She must (be) beautiful when she was young.

Ex.4. Translate into English:

Koltas - tai Samuelio Kolto sukonstruotas šaunamasis ginklas. Pirmasis koltas buvo patobulintas revolveris, sukurtas 1835 m. Kolto sistemos pistoletas buvo sukonstruotas 1911 m. Jo kalibras 11,43 mm, užtaisyto 7 šoviniais masė 1,25 kg. 7-me dešimtmetyje JAV kariuomenei pagamintas automatinis kolto sistemos 5,56 mm šautuvas. Jo masė 3,45 kg, greitošauda 150-200 šūvių per minutę, dėtuvės talpa - 20 arba 30 šovinių.

Ex.5. Insert the appropriate prepositions:

1. They were sympathetic ____ our plans. 2. I have no interest ____ politics. 3. Have you ever dreamed ____ becoming a

pilot? 4. The statue is carved ____ stone. 5. The blade ____
the knife is made ____ stainless steel. 6. ____ spite ____
some misunderstandings, everything went ____ perfectly. 7. I
give ____ ____ you because I see that you never keep your word.

Ex.6. Divide the sentence into sense groups and read it fluently. Mind intonation at the end of each sense group:

So at the age of 16, Samuel Colt became a sailor, which
gave him long hours to think about guns and also make drawings
of the gun he dreamed of that would shoot more than one shot
without being reloaded.

Ex.7. Answer the questions:

1. What do you think of when you hear the name of Samuel
   Colt?

2. At what age did S.Colt get interested in guns?

3. When did you start getting interested in guns?

4. Why did Samuel Colt's father think a young man had to
   learn a trade?

5. Did his being a sailor help him create the gun?

6. What kind of gun is a Colt? (You can refer to Ex.4).

7. What do you think is the way to success?

THE CEREMONY OF RETREAT

Respect for our national flag and the national anthem
is rendered on military bases at a ceremony called Retreat.
Retreat is the ceremony at which the flag is lowered at the
end of the day. The base commander determines the time of day
for Retreat. The ceremony sometimes includes a parade where
some of the best trainees may march. The sound of guns and the

playing of the national anthem are indications on a base that the flag is being lowered even if you can't see it. Participation in the ceremony is mandatory for all military personnel, even those who are across the base. They must stop what they are doing, stand at attention, and salute. If they are in civilian clothes, they should remove their hats and place their right hands over their hearts. Drivers should stop their cars when they hear the national anthem for Retreat.

Vocabulary Notes

respect - pagarba

anthem - himnas

render - teikti, duoti

retreat - atsitraukimas; vėliavos nuleidimas

determine - nustatyti

include - apimti

trainee - apmokomas asmuo

indication - požymis, ženklas

participation - dalyvavimas

mandatory - privalomas

remove - pašalinti; nusiimti (kepurę)

Grammar

Must and should

E.g. They <u>must</u> stop what they are doing.

Students <u>must</u> attend classes every day except Sunday.

Drivers <u>should</u> stop their cars.

You <u>should</u> work less. You look so tired.

Ex.1. Use equivalents from the text instead of the underlined words or phrases:

1. Their house is <u>on the opposite side of</u> the street. 2. The United Kingdom <u>comprises</u> England, Wales, Scotland and Northern Ireland. 3. This <u>shows</u> that your work is not satisfactory. 4. He is expected <u>to give</u> a report of the mission fulfilled. 5. We <u>decided</u> not to wait a single minute. 6. Your refusal <u>puts</u> me in a very difficult situation. 7. <u>Take off</u> your hat when you are in the room. 8. I don't think it's <u>compulsory</u> to attend all lectures. 9. We didn't hear about their taking part in the debate. 10. Lying in the sun, he put a magazine <u>on</u> his face.

Ex.2. Use <u>must</u> or <u>should</u>:

1. Don't tell anybody what I said. You _____ keep a secret. 2. I don't think you _____ work so hard. 3. It's already late. You _____ go to bed. 4. You _____ not smoke in the lab. 5. You _____ not cross the street when the light is red. 6. I'm afraid I can't come tomorrow. I _____ finish my work. 7. "_____ we invite the Johnsons?" "I think we _____." 8. You _____ stop smoking or you'll ruin your health. 9. I think you _____ be more polite with him. 10. I _____ pay my debt in two months.

Ex.3. If someone who is trained is <u>a trainee</u>, so what is the following:

a payee; an employee; an absentee;

an escapee; a refugee.

Ex.4. Translate into English:

1. Jis nerodo jokios pagarbos vyresni^ms žmonėms. 2. Vėliavos nuleidimo ceremonijos laiką nustato bazės vadas. 3. Grojant valstybės himną, reikia stovėti ramiai. 4. Visi kariai turi da-

lyvauti ceremonijoje. 5. Ar tai privaloma? 6. Jūs turėtumėt nusiimti kepurę, kai įeinate į kambarį. 7. Tai rodo, kad vėliava nuleidžiama. 8. Ar aptarnavimas taip pat įeina į bilietą?

Ex.5. Read the paragraph. Use the information to complete the chart.

In the Army, the lowest enlisted rank is E-1, which is a private. After E-1 comes E-2. We use the word "private" for this rank, too. E-3 is a private first class (PFC). Then comes corporal, which is E-4. The next rank is sergeant, which is E-5. Staff sergeant, E-6, comes after sergeant.

Branch of Service: _____

_____	staff sergeant
_____	sergeant
E-4	corporal
_____	PFC
E-2	private
_____	private

Ex.6. Answer the questions:

1. What country does the text refer to?

2. What is Retreat?

3. What is the ceremony of Retreat like?

4. How do people participate in the ceremony? Tell what they must and what they should do.

5. What is your opinion about the ceremony of Retreat? Would you like to have it in your country?

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THE UNITED STATES MILITARY ACADEMY

The United States Military Academy was established in 1802, at West Point, New York. West Point is located 50 miles up the Hudson River from New York City. For that reason, it is usually called West Point. It was the first school in the United States that was established for the purpose of training engineers. Early graduates of the Academy built many roads and bridges in the young nation.

The first class had 10 cadets. Now there are about 4500 students at the Academy. They study in two primary fields. One field includes math, science, and engineering. The other includes languages, history, and social sciences.

The Academy provides a four-year college course and confers the bachelor of science degree. At entrance, a candidate takes the oath of allegiance to the United States and agrees to pursue the course of instruction to completion, and to serve in the Regular Army for not less than four years after graduation, unless sooner discharged by competent authority. During their studies, cadets receive monthly allotment from which they must pay for their uniforms, textbooks, and incidentals.

Graduates receive commissions as second lieutenants in the Army. If they would rather, they may be commissioned in one of the other military services.

Vocabulary Notes

provide - suteikti, duoti
confer - suteikti (laipsni, varda)

bachelor - bakalauras

oath of allegiance - ištikimybės priesaika; karinė priesaika

pursue - siekti; vykdyti

completion - (už)baigimas

discharge - demobilizuoti

allotment - paskirta, nustatyta piniginė suma

incidentals - smulkūs dalykai (pirkiniai)

Grammar

The other(-s) and other(-s)

E.g. They study in two primary fields. <u>One</u> field includes math, science, and engineering. <u>The other</u> includes languages, history, and social sciences.
She was holding the wheel with <u>one</u> hand and waving with the other.
I don't like red. Do you have <u>other</u> colors?
I don't like these books. I'd like to see <u>others</u>.

Ex.1. Compare West Point and your Academy. Fill in the blanks. Use as many words in the blank as necessary:

_____ was established in _____ in _____.

It is located _____not far from _____. It

was the first _____ in Lithuania established for the

purpose of _____. First graduates of the Academy _____

_____.

The first course had _____ cadets, Now there are about _____

students at the Academy. They study in _____. There are

different subjects taught here, such as _____

_____.

The Academy provides a _____ course and confers
_____. At entrance, a candidate

_____

_____.

Cadets receive monthly grants from which _____

_____.

Graduates of the Academy receive commissions as _____

_____.

If they would rather, they may _____

_____.

Ex.2. Insert the proper pronouns other(-s) or the other(-s):

1. Only Mary's here. Where are _____? 2. He has two
sons. One boy is twelve and _____ is ten. 3. We live on
_____ side of the street. 4. He enjoys spending_____
people's money. 5. Have you hurt _____ hand? 6. She works
on _____ side of town. 7. The voice on _____ end of
the telephone sounded strange. 8. I see only five students.
Where are _____ six? 9. They have no _____ problems.
10. _____ times we visited them were more pleasant.

Ex.3. Translate into Lithuanian using the dictionary:

In order to qualify for admission to the US Naval Academy
a candidate must be a US citizen, of good moral character,
between the ages of 17 and 22 on July 1 of the year in which
they enter, in the top 40% of their class, and unmarried. In
addition, to be considered for admission, the candidate must
obtain a nomination from an official source which includes
US Senators, Representatives, the Vice President, the Mayor
of Washington, D.C., and the Resident Commissioner of Puerto

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Rico. Factors considered by The Admissions Board are: the candidate's school record; official college board entrance test scores; extracurricular activities; and recommendations from school officials and others attesting to the candidate's leadership potential, sound moral character, and physical fitness.

Ex.4. Read Alex's schedule for the week. Complete the chart:

Alex is planning his schedule for a week. On Monday, he will pick up his uniforms from the laundry. The next day, he needs to report to the Military Pay Office to get his money for his trip. On the same day, he should check to make certain that the Military Travel Office has made reservations for his flight. On Wednesday, he must return the books and tapes that he borrowed from the library. While he is in that area, he should return the materials he borrowed from the gym, too. The next day, he will wash and pack his clothes. He must remember to meet Ann that evening for dinner at 1900 hours. He leaves early on Friday morning. He must be at the airport at 0600 hours.

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
pick up uniforms from laundry	_____ _____ _____ check Military Travel	return books and tapes _____ _____ _____	_____ _____ _____ _____	_____ _____

Ex.5. Answer the questions:

1. Have you ever heard about West Point before?

2. Where is the USMA?

3. What was its purpose in the early days?

4. How many students does it have now?

5. How long is the college course?

6. What do cadets agree to do at entrance?

7. What commissions do graduates receive?

8. Do they have the right to be commissioned in other services than Army?

SEAPLANES

A seaplane is an airplane that can land, float, and take off on water. In the U.S., Glenn Curtiss built and flew the first of these planes. In 1911, he took off from and landed on the water in San Diego, California. The F-boats used by England during WWI were a result of Curtiss' work.

In 1912, he built the "Flying Fish", a model for all true flying boats. The main structure was like a boat - large enough to hold a pilot and passengers, and to which wings, engines, and propellers were attached.

In 1919, the U.S. Navy's NC-4 made the first crossing of the North Atlantic by way of Newfoundland, the Azores, and Portugal. In the 1930's, the largest and fastest aircraft in the world were seaplanes. This was the peak of their development. A seaplane was used by Admiral Richard E. Byrd to map Antarctica from the air. The first Canadian mail flights over the Rocky Mountains were made by seaplanes. However, these flights were too expensive to be widely used.

After the start of WWII, the military and commercial significance of seaplanes gradually lessened. There were se-

veral reasons for this: (1) land based planes could fly longer distances, (2) more land bases had been built, and (3) aircraft carriers had been introduced. After the war, development of water-based aircraft continued but only in a small way.

There are some rather special requirements for a seaplane. A seaplane must be able to float on water. It must also be able to support its own weight while moving along the water surface at speeds up to flying speeds. In addition, it must be able to take off and land with stability and control on the part of the pilot. Its structure must be strong enough to resist the shock of landing. Finally, it needs to be water resistant enough to allow take-off runs.

Vocabulary Notes

seaplane - hidroplanas
land - nusileisti, nutūpti
float - plaukti, plūduriuoti
take off - pakilti
hold - turėti, talpinti
engine - variklis
attach - pritvirtinti
map - sudaryti žemėlapį
expensive - brangus
lessen - sumažinti
(aircraft) carrier - lėktuvnešis
introduce - įvesti; pradėti naudoti
support - paremti; palaikyti, išlaikyti
weight - svoris
resist - priešintis

Grammar

1. Enough and too

E.g. The main structure was <u>large</u> <u>enough</u>.
You don't work <u>hard</u> <u>enough</u>.

These flights were <u>too</u> <u>expensive</u>.
The tea is <u>too</u> <u>hot</u>.
You work is <u>too</u> <u>much</u>.

2. The Infinitive of Purpose

E.g. Its structure must be strong enough <u>to resist</u> the
shock of landing.
He had to put on glasses <u>to read</u> the letter.

Ex.1. Fill in the blanks using the appropriate word:

1. Glenn Curtiss (built, floated, attached) the first sea-
plane. 2. The main structure was large enough to (hold, attach,
take off) a pilot and (propellers, passengers, boats). 3. A
seaplane is a boat with wings, engines and propellers (introdu-
ced, lessened, attached) to it. 4. In 1919, the US Navy made the
first Atlantic (flying, landing, crossing). 5. The crossing was
made by (air, seaplane, way) of Newfoundland, the Azores and
the Portugal. 6. Admiral Richard E. Byrd used a seaplane to
(support, map, introduce) Antarctica from the air. 7. After the
start of WWII, the significance of seaplanes (floated, lessened,
resisted) because aircraft carriers had been (allowed, conti-
nued, introduced). 9. After the war, development of seaplanes
continued but only in a small (weight, way, wing). 10. It must
be able to (control, resist, support) its own (requirement,
flight, weight) while moving along the water surface. 11. It
must be able to take off and land with (significance, stabili-
ty, development) and control on the part of the (propeller,
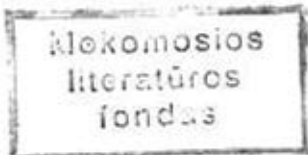
pilot, engine). 12. It needs to be water resistant enough to allow (weights, crossings, take-off runs).

Ex.2. Find in the text sentences with _enough_ and _too_ and the Infinitive of Purpose. Translate them into Lithuanian.

Ex.3. Translate into English:

1. Lėktuvas per sunkus, kad galėtų pakilti. 2. Propeleris nėra pakankamai pritaikytas naudoti tokiuose sraigtasparniuose. 3. Kelionė per daug pavojinga, kad tu galėtum vykti vienas. 4. Jis nepakankamai patyręs dirbti tokį darbą. 5. Ji pernelyg jauna, kad galėtų tekėti. 6. Situacija nėra pakankamai stabili, kad galima būtų kalbėti apie ateities planus. 7. Jis perdaug protingas, kad to nesuprastų.

Ex.4. Translate the text into Lithuanian using the dictionary:

Curtiss met the necessary requirements in two ways. First, he developed the float seaplane which is basically a land plane with floats substituted for landing wheels. Secondly, he developed the flying boat in which the fuselage and the main float were combined into a single boat-like body. Another very important development by Curtiss was the addition of a landing wheel gear that could be pulled back into the airplane. This led to aircraft that were able to operate from both land runways and water. A later development was an all-base airplane that could operate from a variety of unprepared surfaces such as snow or ice.

Ex.5. Answer the questions:

1. What kind of plane is a seaplane?

2. What was the "Flying Fish"?

3. When was the US Navy's first Atlantic crossing?

4. When were seaplanes the largest and fastest aircraft in the world?

5. What did Admiral Richard E.Byrd use a seaplane for?

6. Why did the significance of seaplanes lessen after the start of WWII?

7. What are the main requirements for a seaplane? Say no less than 5.

THE UNITED STATES COAST GUARD

The smallest branch of the military, the US Coast Guard, was born on August 4, 1790, after the Treasury Secretary, Alexander Hamilton, convinced President George Washington to commission ten revenue cutters. At first, its mission was to deter smuggling and collect tariffs. Today the US Coast Guard is an agency of the US Department of Transportation. During wartime or at the direction of the President, the service is attached to the US Navy.

The service has just 36,000 members including 2,661 women, 59 of whom serve aboard ships. Unlike other services, the Coast Guard has no duty restrictions for women and therefore offers them unlimited career opportunities and equal chance for advancement.

The primary duty of the Coast Guard is to help marine safety and to enforce maritime laws. Its current mission is to patrol the more than 12,000 miles of coastline, to break ice in the polar region, to stop drug smugglers, and to rescue mariners in distress. The Coast Guard performs rescue operations at an average of nine a day, assisting about 120,000 people each year. In addition, the Coast Guard plays an important role during natural disasters. After a hurricane, for example, its planes and helicopters are used to deliver emergency supplies and to evacuate the injured. Coast Guard personnel are constantly meeting new challenges as Congress moves to expand their duties particularly in the war on drugs and the effort to control pollution.

In the Coast Guard community, everyone is dependent on his fellow service member. Personnel, including young recruits, handle boats that cost millions of taxpayers' dollars, and one mistake could lead to injury or even loss of life. The

Coast Guard's training program ensures personnel to accept this
responsibility and to remain true to the Coast Guard motto of
Semper Paratus—Always Ready.

Vocabulary Notes

Treasury Secretary - finansų ministras

convince - įtikinti

commission - skirti

revenue - attr. muitų

deter - sulaikyti, neleisti

smuggle - verstis kontrabanda

tariff - mokestis (papr. muito)

restriction - apribojimas

equal - lygus

marine - jūrų pėstininkas; jūrų, jūrinis

enforce - versti vykdyti

maritime - jūrų, jūrinis

rescue - gelbėti

distress - nelaimė, pavojus

disaster - nelaimė, bėda

hurricane - uraganas

deliver - pristatyti; tiekti

emergency - nepaprastoji padėtis

supplies - pl. atsargos

challenge - iššūkis

pollution - užteršimas

Grammar

Countable and uncountable Nouns

a branch - branches	military
a cutter - cutters	treasury
a member - members	smuggling
a program - programs	personnel

Ex.1. Match the words on the right with the definition on the left:

1. to prevent	a) maritime
2. to take goods illegally from one country to another	b) to rescue
	c) distress
3. to cause to be obeyed or carried out effectively	d) assist
4. concerning ships or the sea	e) disaster
5. to save from harm or danger	f) advancement
6. limited, esp. by law	g) restricted
7. improvement or movement to a higher rank	h) to smuggle
	i) to promote
8. to help in the growth or development	j) to enforce
9. a state of danger or great difficulty	k) to deter
10. to help	
11. a sudden serious misfortune causing great suffering and damage	

Ex.2. Paraphrase the underlined parts of the sentences:

1. During wartime, the service is attached to the US Navy.
2. The service has just 36,000 members. 3. It offers the women unlimited career opportunities. 4. Its current mission is to patrol the coastline. 5. It performs rescue operations at an average of nine a day. 6. Congress moves to expand their duties.
7. Personnel handle boats that cost millions of dollars.

Ex.3. Complete the sentences using one of the given words.
Make it plural where necessary:

1. The _____ Department is responsible for managing the
system of _____ . 2. The Coast Guard has several important
_____ to carry out. 3. The Coast Guard is responsible for
marine _____ . 4. The Coast Guard performs _____ _____
of _____ in _____ . 5. A very important duty is control of
_____ . 6. Helicopters deliver _____ after _____ . 7. The
Coast Guard rescues many _____ every _____ . 8. The _____
of the Coast Guard is well trained.

personnel, safety, rescue, mission, money, operation,
mariner, distress, treasury, supply, hurricane,
pollution, year, people.

Ex.4. Complete the chart using the dictionary:

noun	verb	adjective
conviction		
	collect	
		attached .
		inclusive
		restricted
	limit	
		advanced
promotion		
performance		
	operate	
		assisting
	add	
usage		

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continued

noun	verb	adjective
delivery		
evacuation	expand	
	pollute	
		injured
		dependent
	train	
	prepare	
	smuggle	

Ex.5. Answer the questions:

1. Who authorized the formation of the Coast Guard?

2. What was its mission at first?

3. Under whose command is the US Coast Guard during time of war?

4. How many women serve aboard ships?

5. What is the primary mission of the Coast Guard?

6. What is its current mission?

7. What emergency operations can the Coast Guard perform?

8. What saying reflects the aim of the US Coast Guard?

EXPLOSIVES

Explosives are substances that change to a gaseous form with great speed and force, that is, they explode. Chemical reaction causes them to release pressure and heat in all directions. There are three major categories of explosives: mechanical, chemical and nuclear.

In the first category, mechanical explosives, a metal tube is filled with liquid carbon dioxide and sealed. The tube is heated. As the heat changes the liquid to a gas, the gas expands and explodes the tube. They are slow, low-powered explosives.

The second category, chemical explosives, can be further divided into high and low explosives. High chemical explosives invole heat and gas in an extremely fast chemical reaction. The detonation is almost instantaneous. The force created by high explosives is powerful enough to break large objects apart. High explosives are therefore used when a shattering effect is needed.

Nitroglycerin is one of the most powerful high explosives. However, it is not used in military explosives because of a fundamental defect: it is very dangerous to handle and store. Dropping or striking it can cause explosion upon impact. Extremely high or low temperatures can also cause it to blow up.

Low eplosives change from a solid to a gaseous state slowly over a sustained period. They don't require a detonator, but require a fire or a spark to cause it to react. They burn rapidly but do not detonate unless they are in a closed container. Low explosives are used when a pushing effect is needed.

Black powder is an example of a low explosive. It was used for centuries for both gunpowder and blasting. However, it produces relatively little energy. Now it is used mainly in fireworks and in fuses.

The last category, nuclear explosives, depends on a tremendous amount of heat that is produced by atomic fission. Nuclear explosives are the most powerful of the three types.

Vocabulary Notes

substance - medžiaga

release - išskirti

seal - sandariai uždaryti

involve - įtraukti; sukelti

instantaneous - akimirkenio

shatter - sutrupinti, suskaldyti

store - laikyti

drop - numesti

impact - smūgis

blow up - sprogti

sustained - nepertraukiamas, ilgas

spark - kibirkštis

firework - fejerverkas

fuse - degiklis; detonatorius

fission - skilimas, irimas

Grammar

Unless (= if not)

E.g. They burn rapidly but do not <u>detonate</u> unless they are in a closed container.

You won't pass the exam <u>unless</u> you work much harder.

Ex.1. Fill in the blanks with the appropriate derivatives:

gas - _____ form

react - chemical _____

press - to release _____

direct - to release heat in all _____

explode - chemical _____

heat - the tube is _____

extreme - _____ fast chemical reaction

instant - the detonation is _____

power - _____ enough

shatter - _____ effect

danger - very _____

rapid - to burn _____

contain - closed _____

Ex.2. Complete the sentences:

1. Chemical reaction causes explosives to release ....

2. When the tube is heated, the gas expands and ....

3. The force created by high explosives can ....

4. Nitroglycerin is not used in military explosives because ....

5. Low explosives change from a solid state to a gaseous state ....

6. Black powder produces little ....

7. In nuclear explosives heat is produced by ....

Ex.3. Complete the following sentences:

1. I like hot weather unless ....

2. We can meet tomorrow unless ....

3. You won't achieve anything unless ....

4. He won't tell you the truth unless ....

5. He won't be able to understand unless ....

6. I never help him unless ....

7. You won't know what to do unless ....

8. Nitroglycerin won't explode unless ....

9. This substance is not dangerous unless ....

10. The liquid won't change to gas unless ....

Ex.4. Insert the appropriate preposition:

1. Explosives change _____ a gaseous form _____ great speed and force. 2. The metal tube was filled _____ carbon dioxide. 3. They are divided _____ three categories. 4. The force is created _____ heating. 5. Explosion can be caused _____ impact. 6. Black powder was used _____ gunpowder. 7. Now it is used _____ fireworks. 8. The power _____ the explosion depends _____ the heat released. 9. This substance has been used _____ centuries.

Ex.5. Translate into English:

1. Sprogstamosios medžiagos labai greitai reaguoja ir išskiria daug energijos. 2. Juodasis parakas buvo pirmoji sprogstamoji medžiaga. 3. Sprogimas yra spartus didelio energijos kiekio išskyrimas. 4. Metalinis vamzdelis pripildomas dujų ir sandariai uždaromas. 5. Šios medžiagos niekada nesprogsta staiga, nebent jos yra veikiamos smūgio. 6. Susidaro pakankamai galinga jėga, galinti susprogdinti netgi milžiniškus objektus. 7. Šis skystis nevirsta dujomis, jeigu nėra kaitinamas. 8. Temperatūra pakankamai aukšta, kad skystyje pradėtų vykti cheminė reakcija. 9. Nepaprastai aukštos ir žemos temperatūros yra pavojingos laikant sprogstamąsias medžiagas. 10. Kas įeina į šias pagrindines kategorijas?

Ex.6. Answer the questions:

1. What kind of substances are explosives?

2. What happens to explosives during a chemical reaction?

3. What is the principal of mechanical explosives?

4. How are chemical explosives subdivided?

5. Why are high explosives used for a shattering effect?

6. Is nitroglycerin used in military explosives? Why?

7. What reaction takes place in low explosives?

8. Where is black powder used nowadays?

9. What kind of explosives are nuclear explosives?

AN UNLIKELY HERO

Audie Murphy was a very unlikely war hero. When he was sixteen years old, he tried to enlist in the Marine Corps. The recruiter looked at him and decided that Murphy was too small and thin to be a good marine, so he refused to accept him. Later, the paratroopers also rejected him though he tried hard to join them. Finally, he was accepted by the infantry. Murphy was rather small to be a combat infantryman. Nevertheless, in spite of his small height, he was a skillful fighter. He was most famous for the following story:

On January 26, 1945, Lt Murphy and his company were attacked. First, six enemy tanks appeared. Next, came attacking infantrymen. Murphy quickly grabbed the radio and called for artillery fire. He ordered his men to fall back. Because of his own order, Murphy now faced the enemy alone. Despite the fact that he was by himself, he was able to fight off the enemy by operating the machine gun of a burning tank and by calling for artillery support to fire on his own position. Minutes after Murphy jumped off the tank, it exploded. It was difficult to

believe he had survived at all. Finally, Murphy returned to the United States. He received the Congressional Medal of Honor in addition to many other awards. Audie Murphy had proved that, although he was small in build, he was big in courage.

Vocabulary Notes

unlikely - neįtikėtinas

enlist - stoti į karo tarnybą

refuse - atsisakyti

paratrooper - parašiutininkas-desantininkas

accept - priimti

reject - atmesti, atsisakyti

grab - griebti, čiupti

fall back - atsitraukti

survive - išlikti, išgyventi

award - apdovanojimas

Grammar

Although/though/in spite of/despite/because of

E.g. Although he was small in build, he was big in courage.
Although it rained a lot, we enjoyed our holiday.

The paratroopers also rejected him though he tried hard to join them.
The house isn't very nice. I like the garden though.

In spite of his small height, he was a skillful fighter.
In spite of rain, we enjoyed our holiday.

Despite the fact that he was by himself, he was able to fight off the enemy.

She wasn't well, but despite this she went to work.

Because of his own order, Murphy now faced the enemy alone.

We didn't go out because of rain.

Ex.1. Change the underlined words or word combinations by the appropriate ones from the text:

1. Audie Murphy didn't look like a war hero. 2. He tried to join the Marine Corps. 3. The recruiter decided that Murphy couldn't be a good marine because he was small and thin. 4. The paratroopers didn't accept him either. 5. He had special abilities to be a good fighter. 6. In an instant, he took the radio. 7. He demanded artillery fire. 8. He could fight off the enemy alone. 9. He was shooting from the machine gun of the burning tank. 10. He called for artillery help to fire on his own position. 11. He got the Medal of Honor.

Ex.2. Insert the appropriate prepositions where necessary:

1. He wanted to enlist ____ the Engineer Corps. 2. He has recently joined ____ the Army. 3. She looked ____ him ____ surprise. 4. We were accepted ____ the commander. 5. What is the city famous ____? 6. Somebody was calling ____ help. 7. I did it all ____ myself. Nobody helped ____ me. 8. She took various medicines to fight ____ her cold. 9. You can turn ____ the machine ____ pushing this button. 10. Although the room was small ____ size, it was very cosy.

Ex.3. Complete the sentences:
1. We hardly ever see each other although .....
2. Although I had an umbrella, ...

3. Although the soldier was injured, ...

4. Despite the injured foot, ...

5. I didn't like the food though ......

6. He didn't eat despite ......

7. Although he wasn't hungry,......

8. Because of ......, I never hear what the teacher is explaining.

9. I didn't want to meet her because ......

10. She didn't come because of ......

11. We are not very good friends although ......

12. I didn't recognize her because of ......

Ex.4. Complete the sentences using although/in spite of/because/because of:

1. a) _____ all our careful plans, a lot of things went wrong.

   b) _____ he had planned everything carefully, a lot of things went wrong.

   c) Everything was fine _____ we had planned everything.

2. a) I went home early _____ I was feeling unwell.

   b) I went to work the next day _____ I was feeling unwell.

   c) I was absent yesterday _____ my illness.

3. a) I managed to go to sleep _____ there was a lot of noise.

   b) I couldn't get to sleep _____ the noise.

   c) I couldn't get to sleep _____ the neighbors were making noise.

4. a) He passed the exam _____ he didn't study at all.

   b) He didn't pass the exam _____ he didn't study at all.

c) He didn't pass the exam _____ his hard and long studies.

d) He didn't pass the exam _____ his laziness.

Ex.5. Translate the sentences:

1. In spite of his small build, he was big in courage.

2. Although he was small in build, he was big in courage.

3. Because of his small build, he wasn't accepted to the Marine Corps.

4. They didn't want to accept him because he was small in build.

5. Despite the fact that he was rejected, he tried again and again.

Ex.6. Answer the questions:

1. Why wasn't Audie Murphy accepted to the Marine Corps?

2. Why do you think a good marine can't be small and thin?

3. What is Audie Murphy famous for?

4. Why was it difficult to believe he had survived at all?

5. What kind of man do you think can become a hero?

6. Do you need a very special time and situation to become a hero?

THE DAY AN AIRPLANE CRASHED
INTO THE EMPIRE STATE BUILDING

PART I

The sky was cloudy in New York City, on Saturday mornong, July 28, 1945. It was foggy and drizzling. The temperature was 67 degrees Fahrenheit, and the wind was blowing from

the northeast at five miles per hour. The visibility was two and one half miles. The people on the observation tower of the Empire State Building could see only a gray fog surrounding them.

On this same morning in Bedford, Massachusetts, Lt Col William F.Smith, Deputy Commander of the 457th Bomber Group, took off in his Army Air Force B-25 Mitchell Bomber plane. This was going to be the final portion of a cross-country flight that had originated in Sioux Falls, South Dakota. He was an experienced pilot, a veteran of 34 bombing missions. There were two other men on board the plane with him.

As the airplane approached New York City, Lt Col Smith radioed the control tower at La Guardia Airport. The tower told him to proceed to Newark, New Jersey, but also said that if he couldn't obtain three miles of forward visibility, he should return to La Guardia.

The 12-ton aircraft, traveling at 200 miles per hour, crossed the East River over Manhattan, heading southwest. It was flying at an altitude of 1,000 feet, not 2,000 feet, the limit then set by the Civil Aeronautics Board for over-city flights. The people below heard the noise, and after looking up, they feared the plane would hit one of the tall buildings nearby. They watched in horror as the plane tried to fight its way out of the group of downtown office buildings.

Most of the witnesses agreed that the pilot was having engine or rudder difficulty. Many said the plane wobbled while the pilot made a last effort to avoid hitting anything. Then it happened! The plane crashed straight into the Empire State Building! The wings broke off and crashed to the street. The rest of the plane burst into flames, and pieces fell to

the ground. The upper part of the building had also caught on fire from the crash. Witnesses reported the crash to La Guardia Airport, but it's interesting to note the people there couldn't believe it happened. They thought the callers were making up stories.

However, it was true. The terrifying disaster that many people had feared and talked about for many years finally happened. A low-flying airplane had crashed directly into the world's tallest building!

Vocabulary Notes

drizzle - dulksnoti
visibility - matomumas
deputy - pavaduotojas
proceed - tęsti; keliauti toliau
head - vykti (kokia nors kryptimi)
altitude - aukštis
witness - liudininkas
rudder - vairas
wobble - svyruoti
avoid - išvengti
crash - lėktuvo sudužimas; avarija
burst into flames - užsiliepsnoti

Grammar

-ing forms

Noun: What a nice <u>building</u> it is!
Gerund: I enjoy <u>traveling</u>.
Participle I: It was <u>raining</u> heavily.
Adjective: Isn't it an <u>interesting</u> story?

Ex.1. Paraphrase the underlined words or phrases:

1. The <u>visibility</u> was two and a half miles.

2. It was the final portion of <u>a cross-country flight</u> that <u>originated</u> in Sioux Falls.

3. The plane <u>approached</u> New York City.

4. The tower told him <u>to proceed</u> to Newark, New Jersey.

5. If he couldn't <u>obtain three miles of foward visibility</u>, he should return.

6. The aircraft <u>headed</u> southwest.

7. It was flying <u>at an altitude of 1,000 feet</u>.

8. The plane tried <u>to fight its way out</u> of the group of <u>downtown</u> office buildings.

9. The plane was <u>wobbling</u>.

10. The building <u>burst into flames</u>.

11. Witnesses <u>reported the crash</u>.

12. They thought the callers were <u>making up stories</u>.

13. The disaster that many people <u>had feared finally</u> happened.

Ex.2. Define the part of speech of the words ending in -ing.

1. It was drizzling on that Saturday morning. 2. The wind was blowing hard in the whole surrounding area. 3. All we could see was the fog surrounding us. 4. The police are surrounding the house. 5. The house was built in very pleasant surroundings. 6. He was a veteran of a suprising number of bombing missions. 7. The aircraft was heading towards the building at a shocking speed. 8. The pilot was having something like engine difficulty. 9. I think it's just some misunderstanding. 10. A low-fly-

ing airplane was traveling towards the crossing. 11. Oh, it's really interesting!

Ex.3. Insert the right prepositions where necessary:

1. The wind was blowing ____ ten miles ____ hour. 2. Lt Col Smith took ____ ____ his Army Air Force bomber early ____ the morning. 3. There were no other men ____ board ____ the plane. 4. The plane approached ____ the city and radioed ____ the control tower ____ the airport. 5. Passengers were asked to proceed ____ Gate 16. 6. They were heading ____ northwest. 7. He was driving ____ a too high speed. 8. He cried ____ ____ horror when he saw the plane hit ____ ground. 9. He was fighting his way ____ ____ the crowd. 10. Suddenly the house burst ____ flames and ____ a while everything around was caught ____ fire. 11. I don't believe ____ her. She is always making ____ stories. 12. A branch broke ____ and fell heavily ____ the ground.

Ex.4. Translate into English:

1. Tą rytą dulkanojo. 2. Kada pakilo lėktuvas? 3. Jis buvo pakankamai patyręs, kad galėtų skristi vienas. 4. Kas dar buvo su juo lėktuve? 5. Jam įsakė skristi toliau į šiaurės vakarus. 6. Lėktuvas skrido 200 mylių per valandą greičiu. 7. Kas nustatė skridimo sukėčio ribą? 8. Jis sustingo iš siaubo. 9. Man rodos, jis turi kažkokių sunkumų. 10. Neišsigalvok.

Ex.5. Answer the questions:

1. What was the weather like on that Saturday morning?

2. What kind of pilot was Lt Col William F.Smith?

3. What flight was he taking?

4. What was he told by the control tower of La Guardia Airport?

5. Was he flying at the authorized altitude?

6. What did the people below see?

7. What was the cause of the crash?

8. What did the crash look like?

9. Why didn't the people at the airport want to believe the crash really happened?

10. Why had many people feared the possible crash for many years?

THE DAY AN AIRPLANE CRASHED
INTO THE EMPIRE STATE BUILDING
PART II

Yes, it was true. What people had feared for many years had happened. A low flying airplane crashed into the Empire State Building at 9:52 a.m. on Saturday, July 28, 1945. The bomber airplane had crashed into the building at approximately the 79th floor, 900 feet above the ground. The plane did not bounce off the building but penetrated it instead. The wings broke off with this forceful impact which made a hole 18 feet wide by 20 feet high.

Most of the aircraft continued on into the interior of the 78th and 79th floors, with a portion continuing a distance of 80 feet across the building. One motor flew down a hallway across the 79th floor and out the south wall of the building, falling and crashing through the roof of a nearby 12-story building. The plane's gasoline tanks (which held about 800 gallons of gasoline) exploded, and the flames shot up as high as the 86th floor, 1,050 feet above the street. Gasoline also spilled down one elevator shaft, causing a fire all the

way down to the ground floor.

The plane hit a beam in a elevator shaft, causing two elevators to drop from the 18th floor to the sub-basement. A woman operator of one of these elevators as well as some passengers survived the fall although they were seriously injured. The elevator was almost completely destroyed. All ten elevators in the observation section of the building were damaged.

The 79th floor of the building was occupied by the War Relief Service of the National Catholic Welfare Conference. Luckily, since it was Saturday, the office was not operating with a full staff. Between 15 and 20 female clerks were in the office, though. Eleven of them were killed in the fire. Also the bodies of Lt Col Smith and his two passengers were burned beyond recognition.

This was a tragic event, but if it had to happen, it happened at the right time. It happened on a Saturday when most offices were closed and when the streets below were not crowded with people. The fact that the plane hit the building squarely in the middle also reduced the number of deaths. The cost of the damage was estimated at one million dollars. The building was repaired and remains today one of the most solidly built skyscrapers in the world.

Vocabulary Notes

approximately - maždaug

bounce - atšokti, atsitrenkti

penetrate - skverbtis,(kiaurai) pereiti

spill - iš(si)lieti, iš(si)pilti

elevator - liftas

shaft - šachta

beam - sija

destroy - sunaikinti

damage - sugadinti; padaryti nuostolių

relief - palengvinimas; pagalba

welfare - gerovė

squarely - tiesiai, stačiai

reduce - sumažinti

estimate - įvertinti

repair - remontas

remain - likti

solid - tvirtas, stiprus

Grammar

Adverbs ending in -ly

E.g. The elevator was almost <u>completely</u> destroyed.

They were <u>seriously</u> injured.

Ex.1. Paraphrase the underlined words or word combinations using the equivalents from the text:

1. The plane had <u>a sudden forceful and noisy accident</u> shortly after take-off. 2. Computers <u>have made a strong influence</u> on modern life. 3. How much oil does this can <u>contain?</u> 4. She died of hunger but her children <u>continued to live</u>. 5. The penetrating rain <u>spoiled</u> a large part of the wall. 6. They only employ <u>women</u> as nurses. 7. The city has changed <u>so much that it was impossible to recognize it</u>. 8. It's <u>too hard for me to understand</u> why they didn't survive. 9. The car crashed <u>directly</u> into the tree. 10. <u>There were not many people in the streets</u>.

Ex.2. Insert adverbs or adjectives:

1. He (great/greatly) feared that moment. 2. The plane will
be landing in (approximate/approximately) fifteen minutes.
3. The tank exploded (forceful/forcefully). 4. (Lucky/luckily)
they escaped the fire. 5. You were (lucky/luckily) to escape
the fire. 6. The (heavy/heavily) rain penetrated right through
the skin. 7. It was raining (heavy/heavily). 8. He was put into
hospital with (bad/badly) injures. 9. I have never been so (bad/
badly) injured. 10. I (complete/completely) forgot about it.
11. They are (close/closely) relatives. 12. The building was
(great/greatly) damaged. 13. It was a very (unforgetful/unfor-
getfully) event. 14. It's a very (solid/solidly) built structu-
re. 15. He is very (solid/solidly) in build. 16. The office was
not operating with (full/fully) staff. 17. The machine wasn't
(full/fully) operating.

Ex.3. Translate into Lithuanian:

1. Most of the aircraft continued on into the interior.
2. The flames shot up as high as the top floor. 3. A woman
operator as well as some passengers survived the fall. 4. The
building was occupied by the War Relief Service of the Natio-
nal Catholic Welfare Conference. 5. Since it was Saturday, the
office was not operating with a full staff. 6. Between 15 and
20 female clerks were in the office, though.

Ex.4. Define to what parts of speech these words belong. Trans-
late them into Lithuanian:

    1. fear, fearful, fearfully, fearfulness, fearless;
    2. bomb, bombing, bomber, bombardment;
    3. force, forceful, forced, enforce, forced;

4. explode, explosion, explosive;

5. flame, inflamation, flammable, inflammable;

6. elevate, elevator, elevation;

7. base, basic, basement, baseless;

8. operate, operator, operation, operating, operative, operable;

9. survive, survivor, survival, survivable;

10. destroy, destroyer, destruction, destructive, destructiveness;

11. observe, observer, observation, observing, observable;

12. recognise, recognition, unrecognizable.

Ex.5. Put the words into questions:

1. floor, building, the, the, plane, crash, of, at, what, did.

2. the, crash, like, look, how, did.

3. the, fire, caused, what.

4. there, many, were, the, in, people, building.

5. them, what, to, happened.

6. the, to, building, the, after, crash, happened, what.

Ex.6. Answer the questions of ex.5.

RADAR

Radar (radio detection and ranging) is the means by which air traffic controllers measure the distance of airplanes from the airport and other aircraft. It sends out short bursts of radio waves and listens between the bursts for ref-

lected sound waves called echoes. The reflected waves are picked up by the receiver, and the corresponding electric currents are used to deflect an electron beam in a tube.

The radar scope, a screen similar to a TV screen, shows the echoes as spots of light called blips. The cycle of these blips lets the controller "see" the aircraft in his sector by providing a continuous visual image of their location. When an airplane is about to leave the controller's sector, he "hands it over" (by radio) to the controller of the next sector. After telling the pilot to tune his radio to the new controller's radio frequency, he terminates his radio contact with the pilot.

Air traffic controllers are technicians highly skilled in interpreting the images they see on their radar scopes. Their job is to focus on the radar scope and to advise pilots when and how to land and take off. They also tell pilots when and how to plot new courses in the case of weather or air traffic changes. The scope of their responsibilities is wide.

Vocabulary Notes

detection - suradimas, susekimas

ranging - nuotolio nustatymas

means (pl. means) - priemonė, būdas

measure - (iš)matuoti

aircraft - skraidymo aparatas, lėktuvas

burst - sprogimas; staigus išsiveržimas, protrūkis

echo - aidas, atgarsis

current - srovė (elektros, upės)

deflect - pakeisti kryptį, nukreipti

beam - spindulys

scope (telescope) - teleskopas; optinis prietaisas;
          ekranas; veiklos sritis

blip - atvaizdas

image - atvaizdas, paveikslas (veidrodyje)

frequency - dažnumas

plot - sudaryti planą; nubraižyti

responsibilities - pareigos, įsipareigojimai

Grammar

1. <u>by</u>

E.g. Radar is the means <u>by</u> which air traffic controllers measure
the distance of airplanes from the airport.

The enemy aircraft was taken <u>by</u> force.

He makes a living <u>by</u> teaching.

2. <u>Conversion</u>

verb: <u>to measure</u> - (iš)matuoti

noun: <u>a measure</u> - matas

E.g. Air traffic controllers <u>measure</u> the distance of airplanes
from the airport.

An hour is <u>a measure</u> of time.

A pound is <u>a measure</u> of weight.

noun: <u>a burst</u> - sprogimas; protrūkis, staigus išsiveržimas

verb: <u>to burst</u> - sprogti; pratrūkti, išsiveržti

E.g. It sends out short <u>bursts</u> of radio waves and listens bet-
ween <u>the bursts</u> for reflected sound.

They gave the signal to warn us they were ready <u>to burst</u>
the bomb.

She <u>burst</u> into tears and ran out of the room.

Ex.1. Paraphrase the underlined words or word combinations:

1. Radar is the means to measure distance.

2. They measure the distance between the airport and aircraft.

3. Waves are picked up by the receiver.

4. Electric currents are used to deflect an electron beam.

5. The radar scope shows the echoes.

6. The echoes are shown as blips.

7. The controller sees the visual image of the aircraft location.

8. He terminated his radio contact in five minutes.

9. Radio technicians are highly skilled personnel.

10. Their responsibilities cover a wide range of primary tasks.

Ex.2. Insert the appropriate prepositions:

1. Aircraft is detected and the distance ____ the airport is measured ____ radar.

2. Radio waves are sent ____ in short bursts.

3. Echoes are picked ____ ____ the receiver.

4. The radar scope is similar ____ a TV screen.

5. Air traffic controllers are highly skilled ____ interpreting images.

6. One controller passes the image to another ____ radio.

7. An electron eam in a tube is deflected ____ electric currents.

8. You'll learn about the radar ____ reading this text.

Ex.3. Define the part of speech of the underlined words. Translate the sentences:

1. She first appeared on the screen ten years ago.

The new training film about radars was first screened only last month.

2. Light and sound move in waves.

The trees waved in the wind.

The children waved their flags as the Queen passed.

3. It wasn't easy for the beginning air traffic controller to spot the hostile aircraft.

The giraffe is an animal with a very long neck and spotted skin.

She wore a white dress with blue spots that evening.

4. The radar screen shows the echoes as blips.

What television shows do you usually watch?

Let me show you my holiday photographs.

5. He tuned his radio to the new frequency. I'm taking my car to the garage to tune the engine.

The piano is out of tune.

Do you know the tune of this song?

Ex.4. Sound, echo, light, contact and change are nouns. What are the verbs? Find their meanings in the dictionary. Write a sentence with each verb. Find a verb in the text which by way of conversion can be a noun.

Ex.5. The text consists of three paragraphs. What titles could you give to each of them?

Ex.6. Translate into Lithuanian:

1. Between the bursts the radar listens for reflected sound waves.

2. When an airplane is about to leave the controller's sector, he "hands it over" to another controller.

3. Their job is to focus on the radar scope and to advise pilots when and how to land and take off.

Ex.7. Translate into English:

Radaras yra naudojamas radiolokacinėse stotyse. Jis padeda surasti skraidančių objektų padėtį erdvėje ir nukreipti juos reikiama kryptimi. Radaras daro tai priimdamas ir išmatuodamas radijo bangų, kurios matosi ekrane, greitį. Radaru taip pat naudojasi laivai ir lėktuvai per rūką arba karo metu. Žmonės, dirbantys radiolokacinėse stotyse, yra aukštos kvalifikacijos.

Ex.8. Answer the questions:

1. Is radar used in other fields not mentioned in the text?

2. Have you ever been to a radiolocation station? If so, what impression did it make on you?

3. What kind of apparatus is radar?

4. What happens when the visual image on the scope is about to leave the controller's sector?

5. What requirements should air traffic controllers meet?

6. Would you rather control air or ground traffic? Give your reasons.

J F K

Part I

In World War II, John F.Kennedy was a Lieutenant in the United States Navy. He served as a communications officer

on PT-109. A PT boat is a small, fast moving, heavily armed pat-
rol boat. The mission of the PT patrols was to stop the move-
ments of enemy troops and to inform headquarters of enemy ac-
tions.

One night, while PT-109 was on patrol, an enemy ship
approached at a very high speed and fired upon the small boat.
Before PT-109 could even fire its own gun, it was cut in two.
The front half of the boat with all crew members on it remained
floating throughout the night.

As daylight came, the men saw an island not far away,
but it was the site of an enemy base. Kennedy gave orders to
try to reach another small island, about three miles away.

During this trip, the crew was forced to abandon the
half of PT-109. They salvaged a big piece of wood which held
the 37-mm gun and used it as a boat. The crew hung onto it and
slowly made their way toward the small island. One man, howe-
ver, had been severely burned and was not able to hang on. Lt
Kennedy pulled him through the water until they reached the
safety of the island later that evening.

The men were exhausted and starving. However, Lt Ken-
nedy returned to the water once again despite his poor physical
condition. He swam for about an hour until he reached a point
where his squadron's boats often patrolled at night. He hoped
to use his light to signal other US PT boats, but none appeared.
After about two hours, he gave up and started to swim back to
where the rest of the crew waited. Fighting strong currents,
the return trip took 12 hours.

Vocabulary Notes

serve - tarnauti

communication - ryšys

patrol - sargyba, patrulis; patruliavimas

approach - pri(si)artinimas

gun - šaunamasis ginklas; šautuvas; patranka, pabūklas

crew - įgula

site - vieta

force - (pri)versti

abandon - palikti; pamesti; apleisti

salvage - gelbėti(laivą, turtą)

severely - griežtai; smarkiai, sunkiai

safety - saugumas; prieglobstis

exhaust - išsekinti, išsemti (jėgas,atsargas)

starve - badauti

point - taškas; punktas

squadron - jūr. eskadra

give up - liautis, mesti (gerti); atsisakyti (nuo pastangų, darbo)

Grammar

Phrasal Verbs

fire on/upon (to shoot at someone or something)

E.g. An enemy ship fired upon the small boat.
The soldiers were charged with firing (up)on women and children.

hang onto (to hold tightly)

E.g. The crew hung onto it and slowly made their way toward the small island.

Hang onto my arm on this icy road.

hang on (to continue holding)

E.g. One man, however, had been severely burned and was not able to hang on.

The climber had to hang on while his companions went to find a rope.

pull through (to make someone or something pass through something (space, water) by pulling)

E.g. Lt Kennedy pulled him through the water until they reached the safety of the island.

The gun has to be cleaned regularly by pulling a piece of old cloth through.

give up (to stop having or doing something)

E.g. After about two hours he gave up and started to swim back.

The doctor told Jim to give up sweets to lose weight.

Ex.1. Use equivalents from the text instead of the underlined words and phrases:

1. - Is Capt Smith in the Air Force?

- No, he is in the Marine Corps.

2. John F.Kennedy was a signals officer on a maritime guard ship.

3. They had no time to fire upon the fast-coming ship.

4. Pvt Brown has been awfully wounded in the battle.

5. It was very dangerous to drag the injured man through the front line.

6. It was the place that the hostile troops had left the day before.

7. A lot of children died in Rwanda because they <u>didn't have food</u>.

8. I <u>have no physical strength</u> to go on <u>holding onto</u> this <u>saved</u> board.

9. The <u>sailors and the captain</u> were the last to leave the sinking boat.

10. Though he was exhausted, the strong current couldn't <u>make</u> him <u>stop</u> swimming.

Ex.2. Complete the sentences using phrasal verbs:

1. The big guns on the shore ____ ____ the attacking ships.

2. How long can a climber ____ ____ this cliff?

3. Grace chose to marry a Muslim and ____ ____ her Christian faith.

4. The window isn't wide enough for me to ____ myself

5. Please, ____ ____, I shan't be a minute.

6. I did want a holiday abroad, but we had to ____ ____ the idea.

7. I can't ____ the thread ____ the eye of this needle; it's too small.

8. That crackling branch could save his life and he ____ ____ with all his might.

Ex.3. We can use <u>a gun</u> to <u>fire upon</u> something. What can we use the following for:

a rope; our will power; a rifle; a coat;
determination; an upturned boat in the sea.

Ex.4. a) What can be:

<u>fast</u> moving; <u>heavily</u> armed; <u>easily</u> floating;
<u>severely</u> burned; <u>terribly</u> exhausted.

b) Define the part of speech of the underlined word, then
say what their general meaning is.

Ex.5. Insert the appropriate preposition:

1. - Betty? She's in the next office. Hang ____ and I'll
call her.

2. There is an unwritten law among the military not to fire
____ defenseless civilians.

3. The sharp edge of the cliff was not very pleasant to
hang ____.

4. The used cartridge cases were picked ____ for recycling.

5. It isn't easy to fire ____ moving targets.

6. Tailors are highly skilled ____ pulling the thread ____
the eye of the needle.

7. In spite ____ the doctor's warning he didn't give ____
smoking.

8. Our boat had been ____ patrol about an hour when a fast
moving hostile ship fired its gun ____ us.

Ex. 6. Translate into English:

1. Jis tarnauja povandeniniame laivyne.

2. Šiuolaikinėse pratybose bet kurios operacijos sėkmė pri-
klauso nuo ryšių sistemos.

3. Patrulinis kateris turėjo   stebėti pakrantės vandenis.

4. Įgulos nariai turi visada būti pasirengę susekti artėjan-
čius laivus ir informuoti štabo būstinę.

5. Po to, kai laivas įsi-ėžė į aisbergą ir ėmė skęsti, įgu-
la buvo priversta palikti jį.

6. Nors daug jūreivių buvo įėsekę, jie pagaliau pasiekė
salą.

7. Jis vadovauja pagrindiniam eskadros laivui.

Ex.7. Answer the questions:

1. What do you know about John F.Kennedy?

2. Could you describe PT-109?

3. What might happen when a ship is fired upon?

4. What features of character helped John F.Kennedy to do what he did?

5. What do you think you would have done if you had been in his place?

J F K

Part II

Since no food or water could be found on the small island, Lt Kennedy decided they would have to go to another island. So once again, they set out using the piece of wood as a boat, and Lt Kennedy once again pulled the injured man behind him.

Three hours later, they reached the island. They found no food, just some coconut milk to drink. That night, it rained heavily. The next day, they continued to search for food and water. Finally, they decided someone would have to swim to the larger island nearby to get food. Kennedy asked Ensign Ross to accompany him. The two men swam for more than one hour and when they landed on the beach, the coral cut their bodies. Instead of the enemy soldiers they had expected to find, they found a broken enemy landing boat. On closer inspection, they came across a container of water and some pieces of old bread which they ate hungrily.

For two nights, the two men waited for a US patrol
boat to come through the passage, but none came. Finally, Lt
Kennedy took a one-man canoe that they had found and returned
to the smaller island. He took with him the few provisions he
and Ross had found.

On the return trip to where Ross waited on the larger
island, Kennedy met more trouble. Bad weather was followed by
a strong storm. The canoe overturned and Kennedy was thrown
overboard. Luckily, a native found him and pulled him by canoe
directly to where Ross was waiting. This surprised Ross who
thought he was well hidden.

Lt Kennedy was having difficultyinbreathing and was
in very poor condition. When he was able to talk at last, he
and Ross tried to speak with the natives. However, the natives
did not understand English. The men repeated "Rendova, Ameri-
can" several times, but the natives still didn't understand.
Rendova was the name of the base where the PT boats were assig-
ned. At last Kennedy took a coconut shell and with a knife he
wrote the following message on it: "ELEVEN ALIVE NATIVE KNOWS
POST AND REEFS NAURU ISLAND KENNEDY". Using sign language, he
communicated to the natives to take the coconut to Rendova.
They finally understood and before setting out showed Kennedy
and Ross the location of a two-man canoe.

Kennedy was exhausted and Ross was sick and very sun-
burned. However, they did not stop. Later that night, they
took the new canoe out into the passage in hopes of sighting
a PT boat. But on the way, another storm began and the huge
waves overturned the boat. The two men hung on to one end of
the canoe. Two hours later, they were washed up against the

coral beaches of the island. They were badly hurt and after reaching the beach, they finally collapsed and slept.

The next morning, they awoke to find four natives standing over them. Fortunately, they were friendly and one spoke English very well. He gave Kennedy a letter from Lt Evans, Commanding Officer of the New Zealand patrol operating near there.

Lt Kennedy and Ensign Ross then returned to the smaller island to give the good news to the waiting men. After that, Kennedy went with the natives to signal the rescue boat. During the trip, he remained in the bottom of the canoe covered with branches so that the enemy could not spot him from the air. When they reached the meeting point, Kennedy heard four shots from the rescue boat. He answered with four shots and the rescue boat picked up the other men and started towards base. They had survived the long ordeal.

In 1960, John Fitzgerald Kennedy became the 35th President of the United States.

Vocabulary Notes

set out - išvykti, išvažiuoti, išskristi
injure - sužeisti
search for - ieškoti ko
Ensign - (amer. jūr.) jaunesnysis leitenantas
landing boat - desanto valtis
come across - (atsitiktinai) susitikti, susidurti
passage - praėjimas, pravažiavimas; sąsiauris
assign - paskirti
sight - pamatyti, pastebėti

collapse - staiga susilpnėti, iššekti (apie sveikatą)

operate - dirbti; veikti

rescue boat - gelbėjimo valtis

spot - atpažinti, pastebėti, pamatyti

survive - pergyventi, patirti; išlikti gyvam

ordeal - sunkus išmėginimas

Grammar

1. Connective Words

since

E.g. Since no food or water could be found on the small is-
land, Lt Kennedy decided to go to another island.

Since you can't answer the question, I'll ask someone
else.

three hours later

E.g. Three hours later, they reached the island.

Later, she said she couldn't remember anything of what
had happened.

finally

E.g. Finally they decided someone would have to swim to the
larger island.

After several long delays, the plane finally left at
6 o'clock.

at last

E.g. At last, Kennedy took a coconut shell and with a knife
he wrote the following message.

At last we found out what had really happened.

after that

E.g. After that, Kennedy went with the natives to signal the rescue boat.

After that, he treated me as if I were a member of his family.

2. Phrasal Verbs

set out (to begin a journey)

E.g. They set out using the piece of wood as a boat.

He set out for work an hour ago. Hasn't he arrived?

search for (to try very hard to find something or someone)

E.g. The next day, they continued to search for food and water.

For over 100 years men have been searching for gold in the hills.

come across (to find something or meet someone by chance)

E.g. They came across a container of water and some pieces of old bread.

I came across this old photograph in the back of the drawer.

wash up (to carry something onto the shore with the waves)

E.g. Two hours later they were washed up against the coral beaches of the island.

Big logs are washed up every day on the west coast.

stand over (stand and watch someone)

E.g. The next morning, they awoke to find four natives standing over them.

Mother, please don't stand over me while I'm cooking, you make me nervous.

Ex.1. Make up the sentences with the appropriate word:

1. The crew were thirsty and hungry, so they had to (come across, search for, set out) food and water.

2. Lt Kennedy and Ensign Ross were waiting in the passage because they hoped to (operate, injure, spot) a friendly boat.

3. The newly commissioned second lieutenant was (injured, assigned, sighted) to the Kelly Air Force base.

4. The survivors were awfully exhausted and (collapsed, pulled, operated) right after they were (set out, rescued, searched for).

5. For the amphibious operations naval forces need (patrol, rescue, landing) boats.

6. Only two men (injured, collapsed, survived) the terrible plane crash.

Ex.2. Complete the sentences using phrasal verbs from the text in the right form:

1. Dawn found her _____ the crib of the sick child.

2. A drop of rain just _____ _____ my nose, so it must be starting to rain.

3. The villagers are helping _____ the woods _____ the missing child.

4. The body was _____ _____ the following morning.

5. The children were always excited _____ _____ on a camping trip.

6. Outside the restaurant, we _____ _____ a man doing a fire-eating performance.

7. They swam for more than an hour and finally _____ _____ the coral beach.

Ex.3. Find in the text sentences with phrasal verbs not used
before. Translate them into Lithuanian.

Ex.4. a) Read the paragraph and find the connective words
that indicate time.

b) Translate the text into Lithuanian with a dictionary
paying attention to phrasal verbs.

Last week, I took my son, Mike, to the Driver's License
Office to take the test for his driver's license. First, we
had to stand in line for about 25 minutes. Then, we went up
to the counter and filled out some papers. Next, we drove
around to the back of the building and waited about 15 nervous
minutes until it was Mike's turn. The highway Patrolman took
the forms along with the proof of insurance and then instruc-
ted Mike to sound the horn, turn on the windshield wipers, then
the lights and the left and right turn signals, and finally to
hit the brakes. After that, the trooper got into the car, fas-
tened his seat belt and the two drove off. About 10 minutes
later, they were back and Mike was parking the car. The troo-
per got out and went into the building. Finally Mike got out
grinning from ear to ear. He had passed! I wasn't sure if I
was happy or not. Eventually, I suppose I'll be glad.

Ex.5. Complete the sentences using a connective in the box:

| in order to | consequently | as a result of |

1. Today, many Americans are very health conscious.
_____ they are eating lighter, healthier foods and in-
cluding exercise in their daily routine. _____ these
behavior changes, the average American can expect to live not
only longer, but fitter as well. _____ tap into this

"healthy" market, the food industry has come up with many new low fat, no fat, and fake fat products.

in order to	since	for this reason

2. Around the holidays the stores can get really crowded. _____, I try to do my shopping early. _____ make it easier for me, I have all my family make a "wish list". _____ I have this list, I don't have to look around for gift ideas. I go into the store already knowing what I want.

Ex.6. Translate into Lithuanian:

1. Po to, kai jie pateko į mažą salą ir nerado nei maisto, nei vandens, vyrai suvokė, kad turės plaukti į kitą salą.

2. Antroje saloje taip pat nebuvo maisto. Tada Kennedy pasiūlė nuplaukti į sąsiaurį ir laukti patruliuojančio Amerikos katerio.

3. Ross tuo metu atsitiktinai rado vienvietę kanoją ir nunešė ją prie vandens.

4. Iš pradžių čiabuviai nesuprato leitenanto, bet pagaliau jis sugebėjo perteikti savo prašymą ženklų kalba.

5. Gelbėjimo valtis nuplukdė sužeistus vyrus į saugią vietą ir galiausiai sunkusis išbandymas baigėsi. Jie išliko gyvi.

6. Kennedy tarnavo JAV laivyne nuo 1941 iki 1945. Jis vadovavo patruliniam kateriui ir gavo laivyno ir jūrų pėstininkų medalius.

Ex.7. Answer the questions:

1. Where were the islands that the crew got to situated?

2. What helped the crew to survive for so many days?

3. How did Lt Kennedy inform the base of their whereabouts?

4. What ordeals did Lt Kennedy and Ensign Ross have to suffer?

5. Do you think that John F.Kennedy's war experience helped him at presidential election time and in office?

THE AUTOMATED BATTLE: DREAM OR REALITY?
Part I

The Persian Gulf War, with its hightech flavor, has created an irresistible impulse to wonder if "fully automated" warfare, with only minimal participation by man, is possible. Since improvements in military technology have, for the most part, served to lessen man's participation in armed conflict and increase his chances of survivability, to what extent will technology eliminate the need for man s participation?

To better understand how technology might impact combat conditions, consider the following basic functions of combat:

• Detect - to obtain information about threats.

• Process - to manage information for decision making and implementation.

• Fire - to implement the decision and neutralize the threat.

Imagine an infantryman with a rifle. To perform his role in combat, he uses the three basic functions - detect, process and fire (D-P-F) - when engaging the enemy. Technology that promises a fully automated weapon system which would perform all three functions has already been developed.

Let us look at four conflicts that have taken place during the past two centuries: the Napoleonic Wars (1803-1815); World War I (1914-1918); World War II (1939-1945); and the Persian Gulf War (1990-1991).

Detect. During the Napoleonic Wars, sight and sound were the principle means of detection. Sight was expanded by use of the telescope. As for sound, remember the famous exhortation to "advance to the thunder of the guns." The sound coming from the firing line easily gave away the location of the center of the enemy formation, since cannons of that era ranged about 1,000 meters. During World War I, the airplane extended considerably the field of vision, while photography made it possible to record information. Both sonar and radar expanded the concept of optic vision to electromagnetic vision during World War II. The Persian Gulf War greatly expanded use of satellites, with systems so sophisticated and powerful that the Iraqis had virtually no place to hide. Satellite technology allowed US forces to flawlessly navigate vast expanses of previously unnavigable desert, chart Iraqi defensive positions virtually to foxhole-level and, with the introduction of the Joint Surveillance and Target Attack Radar System, chart in real time the full-scale retreat of the Iraqis.

Vocabulary Notes

flavor - charakteringa atmosfera
warfare - karas
extent - laipsnis, mastas
consider - svarstyti

detect - susekti, surasti, nustatyti

threat - pavojus

process - apdoroti

manage - tvarkyti

implement - įvykdyti, įgyvendinti

engage - stoti į mūšį

sight— vaizdas

exhortation - raginimas

cannon - pabūklas

range - siekti (atstumą)

extend - išplėsti

sophisticated - sudėtingas

virtually - faktiškai

Grammar

Present Perfect or Past Simple

E.g. These four conflicts **have taken place** during the past two centuries.

I **have lived** here all my life.

The Persian Gulf War greatly **expanded** use of satellites.

I **saw him** yesterday.

Ex.1. Make sure you understand these words or word combinations. Paraphrase them or translate into Lithuanian.

the Persian Gulf War; an irresistable impulse to wonder; improvements in military technology served to lessen man's participation; armed conflict; to increase chances of survivability; to eliminate the need for man's participation; impact combat conditions; an infantryman with a rifle; the principle

means of detection; to advance to the thunder of the guns; the firing line; to give away the location; the field of vision; to record information.

Ex.2. Give synonymous words from the text to the following:

war; to want to know; to take part; to make smaller; to influence; fighting; main; to get; to begin to fight; to happen; to widen; well-known; to get forward; place; greatly; idea, understanding; complicated.

Ex.3. Find in the text sentences with Present Perfect and explain why it is used. Also, explain the usage of Past Simple in the paragraph "Detect."

Ex.4. Complete the sentences using Present Perfect or Past Simple:

1. Your hair looks nice. .....(you/have) a haircut?

2. John .....(break) his leg during the football match on Wednesday.

3. Why is your leg in plaster? .....(you/break) it?

4. "Where is Ann?" "She .....(go) shopping." "When ..... (she/go) out?"

5. "I .....(not/see) you for ages!" "Oh, come on! We ..... (meet) last week."

6. Who .....(invent) printing?

7. "Look! Somebody .....(break) the window." "I .....(not/ do) that!"

8. ".....(you/ever/have) a car accident?" "Yes, I ..... (have) one two years ago."

9. "Do you know this man?" "Yes, I .....(know) him since my childhood."

10. I .....(study) English for ten years.

Ex.5. Translate the last sentence of the text using the dictionary ("Satellite technology allowed US forces...).

Ex.6. Answer the questions:

1. What is one of the main reasons for improving military technology?

2. What are the three basic functions of combat?

3. What are the four basic conflicts of the last two centuries?

4. What was the principle means of detection during the Napoleonic Wars?

5. What did the famous exhortion "to advance to the thunder of the guns" mean?

6. What was the range of cannons at that time?

7. What extended the field of vision during World War I?

8. What was widely used in the Gulf War?

THE AUTOMATED BATTLE: DREAM OR REALITY?
Part II

Process. A commander's ability to process, or do something with, the information detected has experienced a similar evolutionary process. During the Napoleonic Wars, the duty of liaison officers was to modify orders according to the battlefield reality. During World War I, both telephone and telegraph were widely used in communications, while World War II improvements in radio telephony greatly improved communications, expanding both distance and number of persons touched by information. Again, as with detection, the Persian Gulf War was the stage for enormous advances in command, control, communications

and intelligence means without which neither structural nor operational reformulation of staff work would be possible. Sensors installed in airplanes, satellites and remotely piloted vehicles transmit information instantaneously to staffs at several levels, and multiple data can be accumulated and analyzed to be presented in real time for decision making.

Fire. During the Napoleonic Wars, artillery had neither accuracy nor high range. Cavalry was either kept in reserve for a long time or was employed for combat at the moment of decision. At that time, shock wars between high-density infantry troops were the norm. In World War I, the machinegun modified the combat balance, where firepower could outweigh movement, giving way to trench warfare where barbed wire and shovels were of great importance. Although it first appeared in World War I, the tank became the main conventional ground weapon system of World War II. Tanks had enormous mobility and firepower. A very significant fact was that at that time both mechanized and motorized units were created. The airplane together with airborne forces, made three-dimensional envelopment possible. Technology also produced the ballistic missile, multiple launch rocket systems and the atomic bomb against which neither protection nor survivability were available.

During the Gulf War, in the presence of a technological avalanche, Iraq remained immobilized. It was a "stand-off" war, in which coalition firepower and movement prevailed over a greatly outmatched Iraqi military. It also reversed a historical tendency, whereby fire has always contributed to manoeuvre success. During the land offensive of the Persian Gulf War, the roles were inverted and manoeuvre contributed to fire effi-

cacy, compelling the concentration of the Iraqi forces to face
the enveloping movement of the coalition forces.

Vocabulary Notes

liaison officer - ryšių tarnybos karininkas

intelligence - žvalgyba

install - įrengti

remote - distancinis

vehicle - autotransporto priemonė

density - tankumas

troops - kariuomenė

outweigh   - turėti persvarą

trench - tranšėja; apkasas

barbed wire - spygliuota viela

shovel - kastuvas

conventional - įprastinis

airborne - oro desantinis

envelopment - apsupimas

missile - raketa

launch rocket - raketa nešėja

available - galimas, įmanomas

Grammar

1. both ... and ...

E.g. Both mechanized and motorized units were created.
    Both Ann and Tom were late.

2. either ... or .../neither ... nor ...

E.g. Cavalry was <u>either</u> kept in reserve for a long time <u>or</u> was employed for combat at the moment of decision.

You can <u>either</u> write <u>or</u> phone him.

Artillery had <u>neither</u> accuracy <u>nor</u> high range.

He was <u>neither</u> tired <u>nor</u> hungry.

Ex.1. Make sure you understand the following words or phrases. Paraphrase or translate them:

the information detected; has experienced a similar evoliutionary process; to modify orders according to the battlefield reality; number of persons touched by information; enormous advances; structural and operational reformulation of staff work; transmit information instantaneously; multiple data can be accumulated; to be presented for decision making; shock wars; enormous mobility and firepower; three-dimensional envelopment; neither protection nor survivability were available.

Ex.2. Translate the sentences using <u>both ... and .../either ... or .../neither ... nor ...</u>:

1. Buvo plačiai naudojamos ir balistinės raketos, ir raketos nešėjos. 2. Tankai pasižymi ir mobilumu, ir ugnies galia. 3.Neveikė nei telefono, nei telegrafo ryšiai. 4. Duomenų nebuvo galima nei sukaupti, nei analizuoti. 5. Informaciją reikia arba užrašyti, arba tučtuojau perduoti. 6. Nei manevrai, nei ugnis nepadėjo priešui pulti. 7. Ir kulkosvaidžiai, ir tankai tebėra įprastiniai ginklai. 8. Palydovinės sistemos gali būti naudojamos ir puolant, ir ginantis. 9. Šie sraigtasparniai nėra nei lengvi, nei mobilūs. 10. Tankus galima naudoti arba puolime, arba gynyboje.

Ex.3. Translate the last paragraph of the text using the dictionary.

Ex.4. Match the two columns making pairs of synonymous words:

significant	distance
expand	reformation
use	greatly
range	important
considerably	some
sight	standard
experience	numerous
combat	extend
moment	employ
manoeuvre	vision
enormous	cattle
reformulation	mobility
several	instant
multiple	immense
norm	undergo

Ex.5. Translate the underlined words

1. She gave away her money to the poor. 2. He promised not to give away where the money was hidden. 3. He often takes books from me and never gives them back. 4. After two days of fighting, the platoon gave in. 5. The radio is giving out a strange sound. 6. Who gave him away to the police? 7. The criminal gave up to the police. 8. The money was given over to the city fund.

Ex.6. Answer the questions:

1. What does the word "to process" mean?

2. What was the function of liaison officers during the Napoleonic Wars?

3. When did the telephone and telegraph come into use?

4. In what way did radio telephony improve communications?

5. What kind of weapons and military formations were mainly used in World War I?

6. When did the tank first appear?

7. Why was it widely used in World War II?

8. What do you think is three-dimensional envelopment?

THE AUTOMATED BATTLE: DREAM OR REALITY?
Part III. Human Factor of the Battlefield

With the advance of technology, the question remains: Can the nature of war be changed in such a way that the human factor could disappear from future battlefields?

In reality, war is an extremely complex phenomenon arising from different influences: philosophical, political, economic, technological, sociological and psychological. In all of these spheres, man is the main actor because war is related to human expectations and determined by human behavior. For that reason, two points should be stressed:

First, the battlefield is a place of shocke of will involving human factors. Tanks, ships and airplanes are not as important as the people who operate them. The main objective is to subdue the adversary's mind. So, the presence of the human element will always be necessary in order for a battlefield to exist.

Second, the battlefield is a stage where images and perceptions, instead of physical reality, may often determine the final result. In this sense, the battlefield is like any environment in which a human drama is played.

In the distant future, one might imagine an automated battlefield where the combat functions of "D-P-F" totally and effectively integrate. Information gathered would be sent automatically by a communications network to be analyzed by a real-time computer system. This system would then select the weapon and address it against the target without any human participation. In fact, the first step in this direction is the Patriot air defense system, used as an antimissile system during the Gulf War.

The high lethality of the future battlefield might inhibit the participation of soldiers, and technology could offer robotic "humanoids" to replace infantrymen. These future humanoids could operate with autonomous robotic land vehicles and armaments. However, the increasing complexity of new weapons must require operators with considerable technical skills, and the necessary training should be more expensive.

The above ideas suggest the possibility of a future robotic war. However, even though we may be able to visualize an automated battlefield, it is still a long way off. We should not forget that war is a process of extreme disagreement, presenting as essential components the risk of death and the acceptance of sacrifices in defense of the vital interests of society. Man will use all available means to impose his will upon his adversary and will probably not accept a fate based upon a

struggle of robots. As a consequence, the human being will always be in the center of the conduct of war.

Vocabulary Notes

phenomenon – reiškinys

relate (to) - sieti

determine - apspręsti

behavior - elgesys

involve - įtraukti, įjungti

objective - tikslas

subdue - pavergti; nugalėti

adversary - priešas

image - vaizdinys, idėja

perception - suvokimas

environment - aplinka

target - taikinys

lethality - mirtingumas

inhibit - neleisti, sulaikyti

replace - pakeisti

Grammar

1. can/could

E.g. 'Can the nature of war be changed?

I can speak three foreign language.

The human factor could disappear from future battlefields.
Let's wait. They could arrive any time.

2. may/might

E.g. We **may** be able to visualize an automated battle.

"Where's Tom?" "He **may** be in the office."

One **might** imagine an automated battlefield.

The telephone is ringing. It **might** be Tom.

3. must

E.g. The increasing complexity of new weapons **must** require operators with considerable technical skills.

We have no time. We **must** hurry.

4. should

E.g. Two points **should** be stressed.

You look so tired. You **shouldn't** work that hard.

I think you **should** pass the exam. You've been working so hard.

Ex.1. Make sure you understand the following words or phrases. Paraphrase or translate them:

the advance of technology; the nature of war; arising from different influences; human expectations; in order for a battlefield to exist; in this sense; totally and effectively integrate; information gathered; communications network; select the appropriate weapon and address it against the target; antimissile system; autonomous robotic land vehicles and armaments; increasing complexity; considerable technical skills.

Ex.2. Insert the appropriate modal verb (can/could, may/might, must or should):

1. _____ you help me? 2. "What shall we do in the evening?" "I think we _____ go to the movies."3. I'm afraid I _____ not

come tomorrow. 4. Perhaps he _____ not want to see me. 5. Ann is in her office now. She _____ be busy. 6. I haven't decided what to do. I _____ go to London. 7. The train will be late. We _____ wait for a few minutes. 8. You _____ not smoke in here. 9. I _____ get up very early to catch the first train. 10. I don't want anyone to know about it. You _____ not tell anyone. 11. "Someone is knocking at the door. It _____ be Ann." "It _____ not be Ann. She's out of town." 12. You're kidding! It _____ not be true! 13. _____ I borrow your book? 14. You _____ study a bit harder. 15. I think she _____ do well on her test. 16. You _____ go if you want. There's nothing else to do. 17. You _____ not leave the window open when you go out.

Ex.3. Define the parts of speech and translate the words:

appear, disappear, appearance;
real, reality, realistic, unreal, realize, really, realism;
extreme, extremely, extremity, extremist, extremism;
different, differ, indifferent, differentiate, difference;
influence, influencial;
actor, act, activity, activate, acting, action, active, actively, actress;
operate, operation, operational, operator, operative;
exist, existing, existance, existentialism;
automatic, automated, automation, automating, automate;
effective, effectively, effect, effectiveness, ineffective;
integrate, integral, integrity, integration, integrated;
select, selection, selector, selective, selectiveness;
defend, defense, defensive, defendible, defensively, defensiveness, indefensible, indefensibly.

Ex.4. Translate the last paragraph of the text using the dictionary.

Ex.5. Answer the questions:

1. What kind of phenomenon is war?

2. Why do you think man is the main actor in war?

3. What is the main objective in the battlefield?

4. Why can the battlefield be compared with any other environment?

5. What will an automated battle look like?

6. How can you imagine the future battle?

7. To what extent do you think the human participation can be reduced in an automated battle?

THE UNITED STATES SPECIAL OPERATIONS FORCES
Part I

The U.S. special operations forces consisting of Army, Navy, and Air Force special operations, psychological operations and civil forces are essential to the national defence. They are flexible and ready to operate in all politico-military environments from peacetime training, internal defense and nation-assistance operations requested by allies to conventional warfare. Special operations forces can be instruments of U.S. national policy to promote international stability, economic and political pluralism and lessen conditions that create human misery around the world.

The U.S. special operations forces remain ready; they prove their strategic capabilities daily. During the year 1991 alone, 2,000 teams were deployed in 75 countries in every region

of the world. The presence of these teams in areas where no U.S. military forces are stationed or regularly deployed was very important.

Today, the U.S. special operations forces are deployed in 32 countries. These soldiers, sailors, and airmen are professionals. They perform their missions every day of the year from the lowest level to the ambassadorial level, giving advice and assistance and coordinating requirements. The U.S. special operations forces provide the flexibility ranging from special peacetime requirements to equally special wartime support in order to carry out the interests of the United States.

The characteristics of special operations forces rest on five principles. First, these units require high-quality, mature soldiers, sailors, and airmen. High-quality people enable special operations forces to meet different challenges and enjoy long-term readiness mandatory for them. Volunteers must first demonstrate maturity, intelligence, combat skills, and physical toughness in their services and then complete a complex selection process under the most damanding conditions. Next, specialized training and high technology give them the special skills required by their missions. Last, flexible doctrine and functional force structure focus on future threats and missions.

Experiences in recent years demonstrate that the motivation, training and high caliber of the special operations soldiers, sailors and airmen greatly contribute to flexibility and readiness.

These principles guide the U.S. special operations forces today and let them meet future challenges.

Vocabulary Notes

flexible - lankstus

internal - vidaus, vidinis

ally - sąjungininkas

promote - pagelbėti, paremti

misery - vargas, kančia

capability - gabumas, sugebėjimas; (pl) galimybės

deploy - iš(si)skleisti

be stationed - būti dislokuotam

requirement - reikalavimas, būtina sąlyga

provide - ap(si)rūpinti, tiekti

support - palaikymas, parama

mature - subrendęs

challenge - (iš)šaukimas (į dvikovą); iššūkis

enjoy - patirti malonumą; naudotis (teisėmis)

combat skills - kovos įgūdžiai

toughness - tvirtumas, ištvermė

demanding - reiklus

contribute to - prisidėti, padėti; įnešti indėlį
(į mokslą ir pan.)

Grammar

Adjective Affixes

-al (special)

E.g. The U.S. special operations forces remain ready.

A special train was provided for the football supporters.

-cal (psychological)

E.g. The U.S. special operations forces consist of Army, Navy, and

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Air Force special operations, <u>psychological</u> operations, and civil forces.

There must be some <u>psychological</u> explanation for his bad health.

<u>-ible</u> (flexible)

E.g. They are <u>flexible</u> and ready to operate in all politico-military environments.

We can visit you any day; our plans are quite <u>flexible</u>.

<u>-ary</u> (military)

E.g. (see e.g. to -ible)

The government called in the <u>military</u> people to help the police.

<u>inter-</u> (international)

E.g. Special operations forces can be instruments of U.S. national policy to promote <u>international</u> stability.

The conference discussed issues of <u>international</u> safety.

<u>-ic</u> (strategic)

E.g. They prove their <u>strategic</u> capabilities daily.

Every commander should be able to make <u>strategic</u> decisions.

<u>-ing</u> (demanding)

E.g. Volunteers must complete a complex selection process under the most <u>demanding</u> conditions.

Air traffic controller's work is very <u>demanding</u>.

Ex.1. Give synonymous words from the text to the following:

that can be easily changed to suit new needs; ability to fight; in the inside; fully grown and developed; ability to be

strong, not easily weakened; to be situated; something demanded; to supply; to help actively in something; to join with others in giving; an invitation to someone to compete or fight; to have and use.

Ex.2. Complete the sentences using the vocabulary from the text in the necessary form:

1. During WW II John F.Kennedy's unit was _____ in the Solomon Islands.

2. The aviation battalion provides aviation _____ for the division.

3. The child has great _____ for music and should be trained.

4. Since challenges might be widely different, armed forces should be very _____.

5. Soldiers are not born with _____. These skills are trained.

6. "Where is your unit _____?" "In Europe."

7. What are the _____ for joining the military?

8. Specialized training and _____ of character help soldiers operate in the most _____ situation.

9. Though he is only 12 years old, he behaves in a very _____ way.

10. Her baby died and, to add to her _____, her husband left her.

Ex.3. Make sure you understand these words or word combinations. Paraphrase them or translate into Lithuanian:

are essential to the national defense; politico-military environments; nation-assistance operations; conventional warfare; conditions that create human misery; in order to carry out the interests; to meet different challenges; long-term readiness;

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focus on future threats; high caliber of the special opera-
tions soldiers.

Ex.4. Find in the text sentences with the suffixes -ic and
-ing. Translate them into Lithuanian.

Ex.5. a) Make adjectives from these words adding affixes:

politics; realist; influence; operation; excite; phylosophy;
imagine; base; interest; automate; second; sculpture; terror;
continent; bore; prime.

b) What part of speech are these words? Translate them:
contribute, contributor, contributional, contribution;
enjoyment, enjoyable, enjoy;
drama, dramatic, dramatist, dramatize;
operate, operational, operation, operationally;
capable, capability, incapable, incapably.

Ex.6. Read the 1st and 4th paragraphs of the text. Present the
information provided in them in the form of a chart.

Ex.7. Answer the questions:

1. What do the U.S. special operations forces consist of?

2. What is the purpose of the United States operations for-
ces?

3. How do they prove their strategic capabilities?

4. What level do these forces operate at?

5. What are the five basic principles on which the charac-
teristics of special operations forces rest?

6. What are the requirements to join the special operations
forces?

7. What contributes to flexibility and readiness?

THE UNITED STATES SPECIAL OPERATIONS FORCES

Part II

Specialized Training

The second fundamental principle of the U.S. special operations forces is the need for as intensive training as possible. Training must include autonomous special operations exercises and regular joint training with conventional forces. Special operations forces train for missions that, according to joint and service doctrine, only they conduct. So, their training must be as challenging and as exacting as their demanding missions.

Special operations skills include language proficiency and familiarity with other cultures, which improve the force's effectiveness during peacetime military assistance activities.

These same skills are as important as ever in conflict especially in combined operations with allies. This was demonstrated during Operations Desert Shield/Desert Storm when special operations forces were attached to coalition units for coordination and liaison, training in tactics, combat techniques and procedures, including planning and calling for close air support and for support during the liberation of Kuwait.

Leader training is of particular importance. In addition to their services' leadership training, special operations leaders must improve their tactical as well as technical skills, focus on integrating special operations forces in joint operations and learn more about the requirements necessary for peacetime military assistance activities.

Integrating special operations forces into computer-guided command post exercises and battle simulations will also improve the training and tactical proficiency of both conventional and special operations leaders.

Ability to use the newest technology is vital to special operations forces leaders and can offset adversary superiority in numbers, firepower as well as mobility. High technology research and development are key components to special operations modernization planning. They focus on improved mobility programs, flexible command and control systems, improved night-vision capabilities. communications systems, better ability to react rapidly, conduct synchronized, deep penetrations into and out of denied areas, and enjoy shorter decision-making as well as implementation timelines.

Vocabulary Notes

exercises - mokymai

joint - jungtinis (tarp tarnybų)

proficiency - įgudimas, mokėjimas

familiarity - su(si)pažinimas

improve - (pa)gerinti

combined - jungtinis (tarp tautų)

attach - pritvirtinti, prijungti

call for - reikalauti

particular - ypatingas

command post - vadavietė

simulation - panašumas, imitacija

offset - atlyginti, kompensuoti

superiority – pranašumas

conduct – vesti, vadovauti

penetration – skverbimasis, puolimas, siekiant
                    pralaužti frontą

denied area – priešo ginama zona

Grammar

as...as

E.g. The second fundamental principle of the U.S. special ope-
rations forces is the need for as intensive training as
possible.

She doesn't run as fast as she used to.

Those trees can be as big as twenty feet across.

Ex.1. Use equivalents from the text instead of the underlined
words and phrases:

1. Observers from different countries watched the army mano-
euvres on land.

2. Operations including allied forces require a high degree
of coordination and liaison.

3. Having very high technology can compensate for inferio-
rity in numbers, firepower or mobility.

4. Special operations forces also lead peacetime military
assistance activities.

5. The U.S.A. and the former Soviet Union supported each ot-
her in WW II.

6. I would like to make my ability to speak English better.

7. Our unit was joined to the naval college for six months.

8. The letter that the messenger had to deliver was of spe-
cial importance.

9. Battle <u>imitation</u> training on sand tables was part of our daily classes.

10. After a course in leadership he had to conduct an <u>opera-</u>
<u>tion including units from three services</u>.

Ex.2. Make sure you understand these words or word combinations.
Paraphrase them or translate into Lithuanian.

the need for intensive training; according to joint and ser-
vice doctrine; peacetime military assistance activities; coa-
lition units; coordination and liaison; close air support; fo-
cus on integrating special operations forces in joint opera-
tions; night-vision capabilities; implementation timelines; re-
search and development.

Ex.3. Find in the text sentences with <u>as...as</u>. Be ready to
translate them.

Ex.4. Translate into English:

1. Specialios paskirties pajėgos kaip ir įprastinės dalyvau-
ja jungtiniuose mokymuose.

2. Specialių pajėgų vadai turi tobulinti savo taktinius bei
techninius įgūdžius.

3. Puolimo į priešo ginamą zoną operacijos turi būti vykdo-
mos kiek galint greičiau.

4. Kovos įgūdžiai kariui yra tiek pat svarbūs kaip ir tech-
niniai.

5. Priešo kiekybinį pranašumą galima kompensuoti geru kovi-
niu pasirengimu, mobilumu ir gerais ryšiais.

6. Geras susipažinimas su šalies kalba ir kultūra leidžia
specialios paskirties pajėgoms pasiekti didelio efektyvumo ka-
rinės pagalbos veikloje taikos metu.

7. Mokymai vadaviečių lygiu yra paprastai kompiuterizuoti.

Ex.5. Translate the last paragraph of the text using the dictionary.

Ex.6. Answer the questions:

1. What are the five fundamental principles of the U.S. special operations forces? (consult PI of the text).

2. What actions does specialized training include?

3. What improves special forces effectiveness in peacetime military activities?

4. What capabilities did special operations forces demonstrate in Desert Storm operations?

5. What kind of training should special operations leaders undergo?

6. What can improve their training?

7. Why is the use of new technology vital to special operations forces leader?

8. What does special operations modernization planning focus on?

THE UNITED STATES SPECIAL OPERATIONS FORCES
Part III
Readiness

One of the fundamental principles of the U.S. special operations forces is long-term readiness. It's necessary that they were ready to meet requirements for short-or no-notice operations in more than one theatre at a time.

If the change, instability, ambiguity, and risk typical of the international security environment were to expose vital resources to threats, that could endanger the U.S. economy, the well-being of friends and overall national security. If this happened, future contingency operations would most likely require special operations early, including reconnaissance or direct-action missions, psychological operations or secret or forcible entries by land, air or sea. If the U.S. special operations forces hadn't been flexible and ready for rapid and unexpected employment worldwide, they wouldn't have met global interests and responsibilities so far.

Special operations forces used in peacetime assistance programs in foreign countries may, with little warning, be required for mid-to high-intensity combat in support of rapidly deploying conventional forces. If this is the case, immediate demands for special operations forces skills and regional expertise will not allow time for retraining or refresher courses. So, special operations forces must maintain high combat readiness standards at all times.

Other special operations forces normally based in the United States can immediately reinforce theatre unified commanders or to carry out missions ordered by the national command authorities. While special operations forces include a number of specialized units and skills, all are organized and trained to work with conventional forces.

If special operations forces could not provide unified commanders with expert and technologically advanced command and control capabilities at every level of joint and allied command, they would not be able to meet the most demanding requirements.

Therefore, both combat forces and command and control capabilities are rapidly deployable, can be tailored to specific requirements, and are maintained at high readiness.

Employment of special operations forces in conflict and peacetime military assistance activities highly contribute to readiness.

Vocabulary Notes

notice - pranešimas; įspėjimas; skelbimas

theatre - karo veiksmų laukas; teatras

instability - nepastovumas, nestabilumas

ambiguity - dviprasmiškumas; neaiškumas

expose - leisti paveikti; statyti (į pavojų)

overall - visas, bendras, visaapimantis

contingency - atsitiktinumas, nenumatytas atvejis

rapid - greitas

meet - patenkinti (reikalavimus)

warning - įspėjimas

immediate - betarpiškas, tiesioginis; neatidėliojamas

refresher courses - tobulinimosi kursai

maintain - palaikyti, išlaikyti

tailor - siūti; perdirbti, pritaikyti

employment - tarnyba; panaudojimas

Grammar

Conditional Sentences (3 types)

Type I. E.g. If this is the case, immediate demands for special operations forces skills and regional ex-

pertise will not allow time for retraining or
refresher courses.

We will go to the art gallery if it is open
today.

If main battle tanks become lighter and more
mobile, they will acquire stealth characteris-
tics.

Type II. E.g. If this happened, future contingency operations
would most likely require special operations
early.

If you took this medicine, you would feel a
lot better.

If helicopters didn't have great mobility and
firepower, they wouldn't be used as instruments
of reconnaissance and attack.

Type III. E.g. If the U.S. special operations forces hadn't
been flexible and ready for rapid and unex-
pected deployment worldwide, they wouldn't ha-
ve met global interests and responsibilities
so far.

If he had known they were in town, he would
have invited them to dinner.

If main battle tanks hadn't been so bulky,
they wouldn't have become easy targets for
antitank missiles.

Ex.1. Fill in the blanks using the appropriate word:

1. Combat readiness of special operations forces is such
that they can be _____ (maintained, tailored, employed)
to the most demanding mission.

2. When the security of the country is _____ (warned,
included, exposed) to danger, special operations forces im-
mediately react.

3. Both conventional and special operations forces are ready to operate in more than one _____ (contingency, employment, theatre).

4. To _____ (meet, warn, employ) the requirements set for the Volunteer Country Defense Service its members regularly attend _____ (maintenance, contingency, refresher) courses.

5. Worldwide _____ (employment, instability, warning) makes it necessary that armed forces deploy at a very short _____ (theatre, notice, ambiguity).

6. The ability to deploy _____ (rapidly, highly, unexpectedly) is one of the requirements for combat forces.

7. Combat readiness of special operations forces is _____ (exposed, maintained, noticed) by their _____ (employment, warning, instability) in conflict and peacetime military assistance activities.

Ex.2. Make sure you understand these words or word combinations. Paraphrase them or translate into Lithuanian:

long-term readiness; to expose vital resources to threats; direct-action missions; forcible entries; mid-to-high intensity combat; regional expertise; reinforce theatre unified commanders; national command authorities; advanced command and control capabilities; allied command.

Ex.3. Find cases of conditional sentences not mentioned in Grammar. State their type and translate them into Lithuanian. Look for similar cases with modal verbs. Pick them out and discuss.

Ex.4. Translate into English. Mind the structure of the three types of conditional sentences:

1. Jei aš sirgčiau, tai neičiau į Akademiją.

2. Aš būčiau pasakęs tau adresą, jei būčiau jį žinojęs.

3. Jei neapsivilksi lietpalčio, sušlapsi.

4. Jei nebūtų liję, berniukai būtų žaidę tenisą.

5. Jei jie gaus mechaniką, jis sutaisys malūnsparnį.

6. Jei nebūčiau įstojęs į Akademiją, būčiau studijavęs teisę.

Ex.5. Finish the sentences:

1. If Bob weren't busy, he _____.

2. If he had come early, I _____.

3. She would cash a check if she _____.

4. If you park your car here, the police _____.

5. They would have used rapid reaction forces if the conflict _____.

6. If you don't tell me the truth, I _____.

Ex.6. Translate the second paragraph of the text using a dictionary. Mind conditional clauses.

Ex.7 Answer the questions:

1. Can you still recall all the five principles that refer to special operations forces? What are they? Which do you think is the most important?

2. What might call for the employment of special operation forces?

3. Why should they maintain high combat readiness at all times?

4. Where can special operations forces that are based in the United States be used?

5. Why is it easy to integrate them with conventional forces?

6. What else besides immediate combat skills can special operations forces offer?

7. What contributes to their readiness?

TURINYS