MINISTRY OF HIGHER AND SECONDARY SPECIALIZED EDUCATION OF THE REPUBLIC OF UZBEKISTAN

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PROFESSIONAL PROGRESS

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Ushbu TJ (MS) YSTJ yo'nalishi talabalari uchun mo'ljallangan "Professional progress" o'quv qo'llanmasi "Ingliz tili" kafedrasi yig'lishida muhokama qilindi va institut uslubiy kengashiga tavsiya etildi.

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Taqrizchilar: BDU Ingliz filologiyasi kafedrasi dotsenti, p.f.n.
H.O'. Yusupova.

BDU "Ingliz tili va adabiyoti" kafedrasi dotsenti,f.f.n.
M.I. Gadoyeva
Bux MTI " YeSTJ" kafedrasi dotsenti
Z.Sh.To'xtayeva

Ushbu TJ (MS) YSTJ yo'nalishi talabalari uchun mo'ljallangan "Professional progress" o'quv qo'llanmasining har bir darsida mavzuning nomi, matnlar, matnlarga oid mashqlar,testlar,grammatik mashqlar berilgan.

Ushbu TJ (MS) YSTJ yo'nalishi talabalari uchun mo'ljallangan "Professional progress" o'quv qo'llanmasi institut uslubiy kengash yig'lishida muhokama qilindi ilmiy kengash muxokamasiga tavsiya etildi " 13 sentabr " 2019 - yil , № 2 raqamli .

So’z boshi

Ushbu kitob ingliz tilini xorijiy til sifatida o’qiydigan,o’rta va yuqori darajali (B1-B2) talabalari uchun mo’ljallangan.

Grammatikaga e’tibor berish har xil tillardagi ko’nikmalar darajasini turli usullar bilan qo’llab-kuvvatlaydi va uning amaliyotga tatbiq etilishiga yordam beradi.Matnlarni o’qish fikrlarni ochiq ifodalashni o’rgatadi.Matnlardan keyinberilgan mashqlar matnlarni mustahkamlashga yordam beradi.Topshiriqlarning aksariyati guruh va juft bo’lib ishlas uchun mo’ljallangan.Bundan tashqari,har bir vazifa qo’shimcha mashqlarni o’z ichiga ooadi.

Tinglab tushunish jarayonida talabalar turli autentik matnlarni eshitibchet tiulini tinglab tushunish ko’nikmalarini rivojlantiradilar.

Preface

This book is for students studying English as a Foregn or Second language from intermediate to upper-intermediate students(B1-B2).

While focusing on Grammar it promotes the level of all language skills in a variety of ways and concentrates on its ptactical application.Reading texts introduces variety of technology-based topics of interest to stimulate the free expression of ideas and open discussions.They are accompanied by post-text tasks and comprehension questions.Many of the exercises are available for group work and pair work and are viable as a classwork led by the teacher.It also includes additional extended context exercises.

In the listening activities students can listen to authentic texts read by real bearers of the language

Предисловие

Эта книга предназначена для студентов изучающих английский как инот сранный или второй язык.

Ориентируясь на грамматику,она повышает уровень всех языковых навыков различными способами и концентрирует на её практическом применениию

Чтение текстов вводит в разнообразные технологически-основанные темы ,представляющие интерес для стимулирования свободного выражения идей и открытых дискуссий.Каждый урок включает в себя текст,активный словарный запас ,а также интерактивные упражнения и задания к текстам.Многие упражнения составлены для группавых и парных работ,а также могут выполняться под руководством преподавателя.

В процессе аудирования учащиеся слушают аутентичные тексты.

Mualliflar

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PART II

CONTENT

UNIT 1 Lesson 1 Albert Einstein

Grammar :Past Simple and Present Perfect tense

My friend went to India on Saturday
My friend has been to India many times recently
I lost my sunglasses, but I found them the next day
I have lost my sunglasses. I can't find them anywhere

Exercise 1.Present Perfect or Past Simple

1. I …….(speak) about it with my friend this week.
2.Mr.Brown (travel) a lot last year.(travel)
3.He ……..(become) a famous musician. (become)
4.You ……well .You can get better results.(not/study).
5.My mate ……..to letters last week(sent).
6. I've washed my hands so I can help you with the cooking.(wash)
7. I ……. his name .I should have written it.(forget)
8.I …….. my pencil. Can you give me another one?(break)
9. Jack …… to Germany for 2 years.(be)
10.Rose met her old friend on her way to the college.She …….. her since they …… the school.(not /see,leave)

Exercise 2. What would you say in these situations? First time, second time.

►You are watching baseball game. You have never seen it before.
This is the first time I've seen the baseball game.
1.Your neighbor's son has broken your window. It has happened once before.
This is_____
2.The heather was broken. That has happened twice before.

_____

3.You are at Amir Timur museum for the first time.

_____

4.Barno has failed her exam again. It has happened once before.

_____

5.Alisher has broken his leg. He has never had such a bad injury.

_____

6. Abdullah lost his key.He has never lost it before.

_____

Exercise 3 .Read the story and fill in gaps given below the text.

Who are they? What have they done?

What has happened?

Linda **1**. _____ outside with Grandmother. She **2**. _____ an apron. So far, she has finished cleaning and washing. She **3**._____- seeds and crumbs.

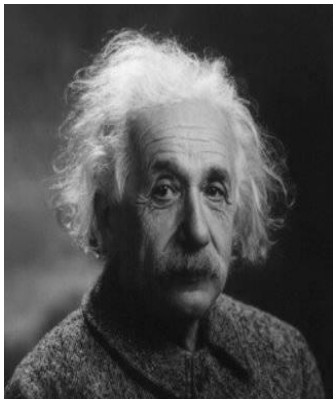
Now Linda and Grandmother are outside. Linda **4**._____ some seeds on the ground to feed the birds. The birds have not come yet.

Recently, Grandmother has moved in with Linda's family. She now **5**. _____ living with them.

Grandmother **6**. _____on the bench. She also wears an apron. She **7**._____ cooking.

1.a. walked b. is walking c. walks d. has just walked
2. .a. is wearing b.has worn c. wears d.wore
3. .a. has also gathered. b.gathered c. is gathering d.was gathering
4. .a. has just dropped b. has never dropped c.dropped d.has ever dropped
5. .a enjoys. b. enjoyed c.is enjoying d. had enjoyed
6. .a. sit down b. has already sat down c.is sitting d.sat
7. .a. finished b. had already finished c. has just finished d.finishes

Albert Einstein



Albert Einstein was a German-born physicist, although most people probably know him as the most intelligent person who ever lived. His name has become part of many languages when we want to say someone is a genius, as in the phrase, "She's a real Einstein". He must have been pretty brainy to discover the Theory of Relativity and the equation E=mc2.

In 1999, 'Time' magazine named Einstein as the Person of the Century. No one could have guessed this would happen when he was at school. He was extremely interested in science but hated the system of learning by heart. He said it destroyed learning and creativity. He had already done many experiments, but failed the entrance exams to a technical college.

He didn't let this setback stop him. When he was 16, he performed his famous experiment of imagining traveling alongside a beam of light. He eventually graduated from university, in 1900, with a degree in physics. Twelve years later he was a university professor and in 1921, he won the Nobel Prize for Physics. He went on to publish over 300 scientific papers.

Einstein is the only scientist to become a cult figure, a household name, and part of everyday culture. He once joked that when people stopped him in the street, he always replied: "Pardon me, sorry! Always I am mistaken for Professor Einstein." Today, he is seen as the typical mad, absent-minded professor, who just happened to change our world.

Exercise 4 .Use the following expressions in your own examples.

Pretty brainy,to be a real Einstein

,

Exercise 5.SYNONYM MATCH: Match the words from the text on the left with their synonyms on the right. Are your answers the same as other students'?

Paragraphs 1 and 2

1.	Probably	*a.*	Mastermind
2	Genius	*b.*	Very
3.	Brainy	*c.*	Predicted
4.	Guessed	*d.*	most likely
5.	Extremely	*e.*	Ruined
6.	Destroyed	*f.*	Intelligent

Paragraphs 3 and 4

7.	Setback	*g.*	Forgetful
8.	Alongside	*h.*	Answered
9.	Papers	*i.*	next to
10.	Figure	*j.*	Problem
11	Replied	*k*	Personality
12	absent-minded	*l*	Reports

Exercise 6. PHRASE MATCH: Match the following phrases from the text.

1.	the most intelligent person	*a.*	this would happen
2	He must have been pretty	*b.*	Name
3.	No one could have guessed	*c.*	Brainy
4.	the system of learning	*d.*	stop him
5.	failed the entrance exams	*e.*	who ever lived
6.	He didn't let this setback	*f.*	over 300 scientific papers
7.	traveling alongside a beam	*g.*	by heart
8.	He went on to publish	*h.*	to a technical college
9.	a household	*i.*	absent-minded professor
10.	the typical mad,	*j.*	of light

LISTENING TASK 1

The technology used in everyday Medieval life

1. Listen to the text and circle the right answer

1.Which of the following inventions were not mentioned in the text?

a)vertical windmills and spectacles

b) mechanical clocks and water mills

c) building techniques and three-field crop rotation

d) vertical drilling tool and sundials

2. The birth of medieval universities dates back to…..

a) 1000 and 1300 AD b) XI-XII c) XX-XXI

3. In the 7th century, learning began to emerge in Ireland and the Celtic lands, where _____ was a foreign language but were eagerly studied and taught.

a)French b)Italian c)Latin

2.Listen again to the text and decide which sentence is true, false or Not Given

1.Medieval universities benefited materially from the translated texts.

True/False /NG

2.They provided a new infrastructure for scientific communities. True/False /NG

3.By the 6th century teaching and learning moved to monastic and cathedral schools. True/False /NG

4.The center of education was the study of the Bible. True/False /NG

5.The Medieval period saw major technological advances of astronomical inventions. True/False /NG

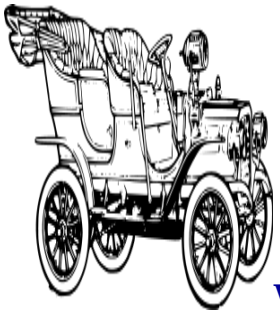
Unit 1 Lesson 2 Michelangelo

Grammar: Past Perfect or Past Simple

Exercise 1.Past Perfect or Past Simple
Hamid collected money .He bought a car.
►Hamid bought a new car when he had collected money.
1.They visited the castle. We arrived later .
2.We enjoyed our holidays. We were on holidays.
3.They came at 5.Mother cooked dinner.
4.Sayyora put all the dishes away. She dried them.
5.The driver looked both ways. He pulled out into the road.
Exercise 2. Correct the sentences.
1.He finished his work by 5 o'clock.
2.They had arrived yesterday .
3.Zamira washed her car when we came.

4.Does they arrive to the beach late at night?
5.We pass a petrol station two minutes ago.
6.The man looked familiar .I saw him before

Exercise 3.Read the story and fill in the gaps putting correct tense forms of the verb.



Who had owned it? What had they done?

The Smith family **1**._____ a car until they bought their first automobile in 1906. Before they **2**._____ it, they **3**._____ horses and a buggy for transportation. They had never owned **4**. _____so expensive before they bought the car.
The Smith family **5**. _____very excited about their automobile. The children **6**. _____in an automobile before their parents purchased the car. They **7**._____ a few automobiles when they **8**. _____to town for supplies. But nobody they knew had ever owned an **9**._____ before that day. They felt very lucky.

1.a. had never owned b. has ever owned c. owned d.has owned
2. a. had bought b. bought c.buying d.has bought
3. a.has never used b. used c. had only used d.is used
4. a. something b. nothing c.everything d. anything
5. a. was b. were c. had been d.has been
6. a.has ridden b. had never ridden c. had always ridden d.rode
7. a. saw b. has never seen c. .had only seen d.see
8. a. had gone b. is going c. has gone d. went
9. a. automobile b.horse c. donkey d. motorbike

MICHELANGELO

Born on: March 6, 1475
Born in: Caprese, near Arezzo, Tuscany
Profile: Sculptor, Painter, Architect and Poet
Nationality: Italian
Death: February 18, 1564

Michelangelo was an Italian Renaissance painter, sculptor, architect, poet and engineer.Michelangelo was born as Michelangelo di Lodovico Buonarroti Simoni on 6th March 1475, in Caprese, near Arezzo, Tuscany. His father, Lodovico di Leonardo di Buonarroti di Simoni did a number of government jobs. Michelangelo's mother was Francesca di Neri del Miniato di Siena. After Michelangelo's birth, his family moved to Florence, where he was raised. Later, after the death of his mother, Michelangelo moved to the town of Settignano, to live with a stonecutter and his wife. He studied grammar with the humanist Francesco da Urbino, in Florence.

As a young boy, he did not have any interest in school and preferred the company of painters. Michelangelo was apprenticed in painting with Domenico Ghirlandaio and in sculpture with Bertoldo di Giovanni. From 1490 to 1492, he attended Florence's ruler Lorenzo de' Medici's school.

Works

During 1499 -1501, Michelangelo was asked to complete an unfinished project that was started 40 years earlier by Agostino di Duccio. It was a statue of David, which was to be placed in front of Palazzo Vecchio. Michelangelo completed the statue in 1504, establishing his prominence as a sculptor. During this time, Michelangelo also painted the Holy Family and St John, also known as the Doni Tondo or the Holy Family of the Tribune. He also may have painted the Madonna and Child with John the Baptist, known as the Manchester Madonna, now in the National Gallery, London.

In 1505, Michelangelo returned to Rome on the invitation of Pope Julius II.

Michelangelo died in February 1564, at the age of 88. His body was taken back from Rome for interment at the Basilica di Santa Croce, fulfilling the maestro's last wish, to be buried in his beloved Tuscany. His house in Rome was demolished in 1874 and the remaining architectural elements were destroyed in 1930. Today, one can see a modern reconstruction of Michelangelo's house, on the Gianicolo hill. In December 2007, Michelangelo's red chalk sketch for the dome of St Peter's Basilica was discovered in the Vatican archives. It is an extremely rare relic, since the maestro destroyed his designs later in life.

Exercise 4. Read the text and say what information is given about Michelangelo's family?

2. Read the text and tell to your friends about Michelangelo's early interests.

3.What kind of his works are mentioned in the passage?

4.Where was he buried ? Was his house kept up to now?

Exercise 5. Define branches of professions

	Person	Branch
1.	*Painter*	*Painting*
2	Sculptor	
3	Architect	
4	Poet	
5	Engineer	
6	Stonecutter	
7	Humanist	

Exercise 6.Match the words with synonyms.

1	was raised	A	Famous
2	Studied	B	Destroy
3	to complete	C	Was brought up
4	Prominence	D	Learned
5	Returned	E	To finish
6	Demolish	F	Was found
7	was discovered	G	came back

Exercise 7. Think what instruments(tools) do the owners of the following professions need?

►Astronomer needs a telescope.

1. Poet needs ……, ……, ……,…….. .
2. Sculptor needs ……., ……., ……..,…….. .
3. Painter needs ……..., ……..., ……
4. Architect needs ……., ……., …….. .
5. Chemist needs ……, ……..., ……..., …… .
6. Physician needs ……, ……., ……..., …….. .

Exercise 8.Speak about one of the famous pictures of Michelangelo.

Listening Task 2

1.Listen to the text and unjumble the words

1	cefunar	
2	Buscotmion	
3	Chemnrient	
4	Icetonsar	
5	Demxiono	
6	Cocutrunrenter	
7	Retoberarvery	
8	losomeribe	

2.Listen to the text and fill in the blanks.

A **blast furnace** is a type of metallurgical 1_____ used for smelting to produce industrial 2 ___ metals, generally 3____ _____but also others such as 4_____ or _____. Blast refers to the combustion air being "forced" or supplied above atmospheric pressure.

In a blast furnace fuel (coke), ores, and 5_____ (limestone) are continuously supplied through the top of the furnace, while a hot blast of air(sometimes with oxygen enrichment) is blown into the lower section of the furnace through a series of pipes called 6_____, so that the chemical reactions take place throughout the furnace as the material falls downward. The end products are usually molten metal and slag phases tapped from the bottom, and 7____ _____ exiting from the top of the furnace. The downward flow of the ore and flux in contact with an upflow of hot, carbon monoxide-rich combustion gases is a 8_____ _____ and chemical reaction process.

In contrast, air furnaces (such as reverberatory furnaces) are naturally aspirated, usually by the convection of hot gases in a chimney flue. According to this broad definition,9 _____ for iron,10 _____ _____ for tin,

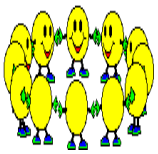
and 11_____ ____ for lead would be classified as blast furnaces. However, the term has usually been limited to those used for smelting iron ore to produce pig iron, an intermediate material used in the production of commercial iron and steel, and the shaft furnaces used in combination with 12_____ _____ in base metals smelting.

Unit 1 Lesson 3 John Walker - Inventor of the Friction Match

Grammar: Future Perfect Tense

Future Perfect Tense

We use ***will have + past participle*** for the action that will be over in the future.
I'm writing letters to foreign firms. I **will have written** to all firms by lunch time.
Sitora and Sevara **will have lived** here for seven years next April.
Will you **have written** all the letters by lunch time?-Yes, I **will have written** them by then.

I shall have spent	I shall not have spent	Shall I have spent?
He (she, it) will have spent	He (she, it) will not have spent	Will he (she, it) have spent?
You will have spent	You will not have spent	Will you have spent?
We shall have spent	We shall not have spent	Shall we have spent?
They will have spent		
	They will not have spent	Will they have spent?

Exercise 1.►I hope *I'll have worn lots of prizes* before I'm twenty.
1.Perhaps _____ my own exhibition by the age of twenty-six..
2.I wonder if _____ by the time I'm thirty.
3.May be _____ many foreign counties by the age of forty.
4.I hope I_____ sums by my pictures too.

Exercise 2. Read the story and fill in gaps given below the text.Who are they? What will they have done? What is going to have happened?

Tyler and William 1._____ their canoe down the river. They are traveling a long distance through trees and canyons. They 2. _____for many miles by the time they 3._____ at their destination. They are going to 4._____ for 2 weeks by the time they finish their trip.

They are going to 5. _____many sights by the time their trip 6._____. They probably 7._____ many wild animals. They will have eaten many fish. They 8._____ many other people by the end of their trip.

1. a paddled b.is paddling c. paddling d. are paddling.
2. .a has paddled b. had paddled c. will have paddled d. paddled
3. .a has arrived b.hasn't arrived c. arrived d. arrives
4. .a have been gone b.has gone c. went d.is going
5. .a saw b.have seen c. has seen d.see
6. .a completed b.is completing c. is completed d. complete
7. .a will see b. has seen c.saw d. will have seen
8.a. will not have seen b. didn't see c.shall have seen d. have seen

John Walker - Inventor of the Friction Match

The modern history of matches goes back to the early 19th century England, where one chemist saw the significance of self-igniting substances and managed to create first version of items that would soon manage to spread across entire world and change the way we look at the fire. This chemist was John Walker, ordinary pharmacist and chemist whose insight and innovation managed to kickstart entire modern industry of matches and lighters.

Walker was born in Stockton-on-Tees in 1781 as a son of John Walker (proprietor of a grocers and wine merchants) and his wife Mary Peacock (who married him in 1766). He had two brothers, James, Thomas, Jane and two sisters named Jane and Mary. Little is known about his young life, but historians claim that he attended local grammar school in Stockton-on-Tees and then went to be apprentice to the Watson Alcock, principal surgeon and doctor of the town. He served him for a while as an assistant-surgeon, before finding out that he cannot accustom himself to the sight of blood and surgical operations. However, time spent as assistant-

surgeon brought him closer to chemistry, which pushed him to study that subject at Durham and York. After spending several years learning pharmacy and apprenticing as wholesale druggists, he returned home to his mother and siblings in 1812 and opened his own shop as "chemist and druggist" at 59 High Street in 1819. By that time he was 38 years old, and was one of the rare pharmacists in town who worked not only with natural ingredients, but also with many chemical substances which were not used much in human or animal medicine back then (and rightly so, many of his cures for “man and beasts” would today been regarded as very dangerous).

Experimenting with various chemical elements finally bore fruits when he created paste that was could combust into flames when scraped to rough surface. He first noticed these effects while working in his hearth at his home. This breakthrough led him to create first simple prototypes of matches which were made from cardboard sticks. By 1824 he started selling those matches, who instantly became very popular in his home town. By changing the design of the sticks into three inch long wooden splints, he soon received offers of purchase from neighboring towns and started selling more and more.

Sadly, his design was not perfect, and because of that he never wanted to patent it. Sulfur on the head of the stick sometimes burned so brightly and hotly, that it managed to detach itself and fall on the floor, damaging either carpet or even clothes of the people who were wielding the match. Sir Isaac Holden independently took over the business that Walker left unfinished and started selling his own matches across the world, gaining the fame as inventor of matches.

John Walker was buried on May 1st 1859 at St. Mary the Virgin Church Parish Yard, Norton, England. He was credited with the invention of matches only after his death.

Exercice 3. Take the answers.

Who was John Walker ?
When and where he was born ?
What he was awarded after his death ?
Who was his wife ?

Exercice 4. Continue the sentences.

The modern history of matches goes …
Walker was born in Stockton-on-Tees in 1781 as a son of ….
By 1824 he started selling those matches, …
This breakthrough led him to create first simple prototypes of …
John Walker was buried on May 1st 1859 at St. Mary the …
Little is known about his young life, but historians claim that he attended local grammar…
By that time he was 38 years old, and was one …
Experimenting with various chemical elements …

Exercice 5. Match the end with the beginning of the sentences.

1. This chemist was John Walker, ordinary pharmacist and chemist whose insight and	, he returned home to his mother and siblings in 1812 and opened his own shop as "chemist and druggist" at 59 High Street in 1819.
2. Sadly, his design was not perfect, and	started selling his own matches across the world, gaining the fame as inventor of matches.
3. Sir Isaac Holden independently took over the business that Walker left unfinished and	paste that was could combust into flames when scraped to rough surface.
4. After spending several years learning pharmacy and apprenticing as wholesale druggists	or animal medicine back then (and rightly so, many of his cures for “man and beasts” would today been regarded as very dangerous).
5. By that time he was 38 years old, and was one of the rare pharmacists in town who worked not only with natural ingredients, but also with many chemical substances which were not used much in human	because of that he never wanted to patent it.
6. Experimenting with various chemical elements finally bore fruits when he created	who instantly became very popular in his home town.
7. By 1824 he started selling those matches,	innovation managed to kickstart entire modern industry of matches and lighters.

Exercise 6. Put the sentence True ore False.

Walker was born in Stockton-on-Tees in 1781 as a son of John Walker) and his wife Mary Peacock _____

He had three brothers, James, Thomas, Piter and two sisters named Jane and Mary. _____

adly, his design was not perfect, and because of that he never wanted to patent it._____

After spending 2 years learning pharmacy and apprenticing as wholesale druggists, he returned home to his mother and siblings in 1818 and opened his own shop as "chemist and druggist" at 59 High Street in 1819. _____

By 1824 he started selling those matches, who instantly became very popular in his home town. _____

This chemist was John Walker, ordinary pharmacist and chemist whose insight and innovation managed to kickstart entire modern industry of matches and lighters. _____

Exercise 7.Comment the figures: 1766, 1812 , 59, 1819, 1824, 1859, 1781

LISTENING TASK 3

1.Listen to the text and define True , False, Not given statements.

1.The first Universities appeared in the Middle Ages. T/F/NG

2.European science was influenced by the Muslim philosophers. T/F/NG

3.Medieval Europe was a poor relation of the East. T/F/NG

2.Listen to the text again and fill in blanks

1. The Middle Ages saw the _____ of the first universities, and the development of the scientific method. It is certainly fair to say that the Rising Star of Islam and the _____ _____ of Byzantium were the true centers of learning, with scholars flocking to Moorish Spain, Byzantium, or the houses of learning in Baghdad. This does not mean that _____ Europe was a _____ backwater, and great minds, influenced by the Muslim philosophers and the translation of the work of the Greeks into Latin, developed their own ideas and theories, many of which _____ modern scientific techniques. The great cathedrals of the age, the formation of universities, the contribution of _____ to the philosophy of science and logic, showed that medieval Europe was not a poor relation of the East.

UNIT 2 **Lesson 1** Sir Isaac Newton

Grammar :T**he Present Perfect Continuous Tense**

We use the Present Perfect Continuous Tense for an action happening **over <u>a period of time</u>:**

Example, Nodir *has been working* all day. He is tired.

We use the continuous form to say **<u>how long.</u>**

Exercice 1 Fill in the spaces with the correct form of the verb in present perfect progressive tense.

Example: He (wait) has been waiting on the train for two hours.

Negative (-)
Example: Don't worry. We (not, wait) have not been waiting for you for long.
1) The children (play) _____ _____ _____ outside all day. They must be getting hungry by now. They need to come inside for dinner.
2) This week, we (read) _____ _____ _____ selections from the Romantic Period in Literature class. My favorite Romantic authors are Poe and Hawthorne.
3) The criminal has not been caught yet. The police (chase) _____ _____ _____ him since yesterday.
4) Lu Peng (make) _____ _____ _____ bread all day. It smells so good! His bakery is next door to our shop. We are taking two loaves of his fresh bread home when we close the shop tonight.
5) The construction workers (build) _____ _____ _____ that house all winter. They (not, work) _____ _____ _____ _____ on it this week, though, because it (rain) _____ _____ _____ every day since Monday.
6) The roses (not, bloom) _____ _____ _____ _____ much lately. We (not, water) _____ _____ _____ _____ them enough. The soil is getting dry.
7) I (not, sleep) _____ _____ _____ _____ very well lately. I think I need to get more exercise during the day. That would help me to feel tired at night.

Exercice 2 Fill in the spaces with the correct form of the verb in present perfect progressive tense.

1) I (write) _____ _____ _____ my new book for ten months. Writing it has taken a lot of hard work and research. Thankfully, it is almost finished.
2) The runners (race) _____ _____ _____ since 9:00 in the morning. Now it is 3:00 p.m., and the leaders are about to cross the finish line.
3) The weather has been dreary all week. It (rain) _____ _____ _____ since Monday. Hopefully, we will have some sunshine this weekend.
4) Anthony (play) _____ _____ _____ soccer his entire life. Soon, he will go to college on a soccer scholarship.
5) The baby (cry) _____ _____ _____ all night. He has been doing that every night since he was born. His parents are so tired. They are hoping that his sleeping habits will change soon!
6) Julian and I (try) _____ _____ _____ to find jobs for two weeks. We are a little discouraged, but we cannot give up.
7) Mrs. Burk is giving her students an algebra test right now. The students (take) _____ _____ _____ the test for thirty-five minutes. They have five minutes until time is up.
8) Ichiro is worried because his keys are lost. He needs to go to work. He (look)

Exercise 3. Write the sentences according to the model.

►***Example: He (wait) has been waiting on the bus for an hour.***
►***Example: She (not, do) has not been doing very well in school lately.***
►***Example: (They, swim) Have they been swimming in the lake?***

1) We (already, bake) _____ _____ _____ the cake. Now, we just have to decorate it with icing. Would you like to help?
2) Have you ever been to Italy? I (see) _____ _____ pictures of the town of Assisi. Some day, I would like to travel there to see its beautiful churches.
3) The voters (elect) _____ _____ a new governor. She (make) _____ _____ _____ her acceptance speech for the past thirty minutes. I hope she will finish soon!
4) The package I sent to Pablo (not, arrive) _____ _____ _____ yet. He (call) _____ _____ _____ the Post Office every day. I don't know what happened to it.
5) The fishermen (not, catch) _____ _____ _____ many fish today. A strong wind (blow) _____ _____ _____ all day, and they are having trouble with their nets.
6) (Edward, receive) _____ _____ _____ the money yet? I sent it to him last week.
7) Mahmoud and Rickie are dirty. They (play) _____ _____ _____ outside all day. It is time for them to come in and take a bath.
8) (You, hear) _____ _____ _____ the news? There was a terrible earthquake in Haiti! The residents need a lot of help.
9) Igor (want) _____ _____ to visit Paris for years. He (save) _____

Sir Isaac Newton

Newton was also a man of versatile quality. He was physicist, mathematician, astronomer, alchemist, and natural philosopher in a row. His contribution in the development of science is a special one. He is best known for his explanation of Universal Gravitation and three laws of motion, and he was able to prove that the reason of both the motion of objects on Earth and of celestial bodies are controlled by the same Neutral laws. These findings could make a revolutionary change in the development of science. In mechanical science his great contribution was in optics. He could make a reflecting telescope. He also made some research on light and stars. His research on General binomial Theorem helped to be introduced today's Calculus. Newton was born to a farmer family but before three months of his birth his father died and then he was brought up to his maternal grandmother as her mother remarried. Newton could show his talent from his early life in The King's School in Grantham and later he joined to the Cambridge University where he took his higher degrees.

Exercise 4. Make up adjective of the following nouns.

► *Artist = well known artist*

Physicist	
mathematician,	
Astronomer	
Alchemist	
Philosopher	

Exercise 5. Paraphrase the underlined parts of the sentences.

1.He is **best known** for his explanation of Universal Gravitation.
2. He **was able to** prove that the reason of both the motion of objects on Earth and of celestial bodies are controlled by the same Neutral laws.
3. He also made some **research** on light and stars.
4.Newton could show his **talent** from his early life.
5. Later he **joined** to the Cambridge University where he took his higher degrees.

Exercise 6. Classify the verbs and write their present forms..

Was, was able, could, made, helped, introduced, died, brought up, joined, took

Regular verb	Irregular verb	modal verb
	Was-is,am	

Exercise 7. Continue the sentences.

1. A scientist is a person, who…….

2. A physicist is a person, who…

4. A mathematician is a person , who …

5. An alchemist is a person , who …

6. An philosopher is a person , who …

Exercise 8.Work in groups. Prepare presentation about I.Newton's life and activity. Add extra information

Exercise 9.Present Perfect Continuous Tense

Nodira/work/5 o'clock a.m.

►Nodira has been working since 5 o'clock a.m

1.Brian /wait/morning

_____

2.Feruza/learn /English/2 years

_____

3.Dilshod/draw/mother's/portrait/ a month

_____

4.Little Malika and Kamola/play/morning

_____

5. Samira/look for/door key/an hour

_____-

6.Students/prepare/exams/a week

_____

7.Khabib/ swim/pool/2 hours

_____

8.Boys/fight/ an hour

_____

Exercise 10. **Read the story and fill in gaps given below the text.**

Who are they? What have they been doing?
Where have they been going?

Ruth and Martha are best friends. They 1. _____ time together since they were young girls. Every morning, they 2._____ dressed and walk to the post office together. They 3. _____ together to the post office every morning for the past 10 years.

Lately, Martha 4._____ well. Ruth 5._____ to the post office alone each morning. Then she 6._____ Martha at home. She 7._____ Martha her mail every morning for 2 weeks. She hopes Martha 8. _____ better soon.

1.a. have been spending b. spend c.spent d. are spending
2.a.gets b. get c. got d.are getting
3.a.has been walking b.have walked c. have been walking d.walked
4.a.didn't feel b. hasn's felt c.doesn't feel d. has not been feeling
5.a. has been walking b.walked c.was walking d.didn't walk
6.a.visited b. visits c. is visiting d.visit
7.a.has brought b. is bringing c.has been bringing d.brings
8.a. felt b. has felt c.will feel d.was feeling

LISTENING TASK

1.Listen to the text and answer the questions.

1.What is silk?_____

2.What is the name of the silkworm which gives the best silk?_____

3.Who is silk produced by?_____

4.What other insects produce silk?_____

2.Listen to the text again and decide whether the statement True or False.

1.Silk is an artificial protein fiber. True/False

2.Fibroin is produced by certain insect larvae to form cocoons. True/False

3.The shimmering appearance of silk is due to the sun rays reflecting the structure of the silk fiber.

True/False

4. Generally only the silk of moth caterpillars has been used for textile manufacturing. True/False

5. There has been some research into other types of silk, which differ at the molecular level. True/False

6.Silk is mainly produced by the larvae of insects undergoing complete metamorphosis. True/False

UNIT2 **Lesson** 2 The Wright brothers

Grammar: Past Perfect Continuous Tense

had been + V **ing** form

We use the Past Perfect Continuous Tense for an action which happened over a period of time.

Lobar felt tired because she ***had been cooking*** all day.

We normally use the continuous with a phrase saying **how long**

We ***had been waiting*** for guests ***for an hour*** when they arrived at last.

Exercise 1. Write two sentences as one. Choose correct Tenses

1.Teacher began to check students papers at 10 a.m. When I came it was 3 o'clock p.m.

►***Teacher had been checking students papers for 5 hours when I came.***

2. Hunters are looking for tiger .It was the fifth days of their search when I met them.

_____

3.The construction of this building began at the end of February. The want to finish it next summer.

_____

4.Farmers try to gather crop as soon as possible. They say they will finish it next week.

_____

5.Girls are tiding the house. They say they will finish it before their parents come.

_____

6.The family decorates the fur tree. They will finish it before the guests come.

_____

7.Dildora is painting her mother's portrait. She wants to give it for her birthday .

_____

Exercise 2. Read the story and fill in gaps given below the text

Who are they? What had they been doing?
Where had they been going?

Donald and Elizabeth had been driving to church before they stopped. They1._____ down a dirt road when they heard a strange noise. Donald stopped the car. He got 2._____ of the car. Then, he helped Elizabeth out of the car. Elizabeth sat and waited for Donald.
Donald looked at the car. It had been going for an hour or so. He knew 3. _____to fix cars. He had been working as a mechanic 4._____ 5 years before he moved to the country. Donald got his tools. He looked 5._____ the hood. It seemed that the engine had been heating up. He crawled under the car.
Donald 5. _____on the car for a while when Jake parked beside 6._____. Jake had been driving home when he saw Donald and Elizabeth on the side of the road. Jake helped Donald fix the car. Donald thanked Jake for his help. Elizabeth waved to Jake as 7._____ drove away. Thanks to Jake's help, they arrived at church on time.

1 . a. had been driving **b.were driving c. drove d. are driving**
2. a.all of b. out of **c. into d. out off**
3. a. when b.who c. how **d.whom**
4. a.since b.yet c. ever d. for
5. a. had been working **b. are working c. were working d.worked**
6. a.her b. . him. **c.his d.them**
7. a.he b.she c. .they **d. It**

The Wright brothers

The Wright brothers – Orville and Wilbur Wright are credited with building and flying the first heavier than air aeroplane. They achieved the first recorded flight on 17 December 1903. Over the next ten years, they continued to develop the aircraft making a significant contribution to the development of the modern aeroplane.

Their particular contribution was in the effective control of an aeroplane, through their three-axis control system. This basic principle is still used today. It was for this control mechanism that the Wright's received their first US patent – 821,393.

Early Life of Wright Brothers

Orville and Wilbur had two elder brothers Reuchlin (1861-1920) and Lorin (1862-1939), and a younger sister Katharine (1874-1929). Their parents were Bishop Milton Wright (1828-1917) and Susan Catherine (Koerner) Wright (1831-1889). Their father worked as a minister in various churches, and as a consequence, the family frequently moved around. Their father encouraged his children to read widely and discuss issues. This climate of intellectual creativity and stimulus encouraged the Wright brothers to pursue a range of interests and studies. When they were young, their father bought them a small 'helicopter' – built in France. They later commented that this helicopter sparked an interest in flight and they sought to build similar models themselves.

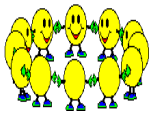
Around 1885, Wilbur became withdrawn after sustaining a facial injury during a game of ice-hockey. This injury and the resulting depression caused Wilbur to give up his dreams of studying at Yale. Instead, he remained close to home, helping his father with ministerial tasks and looking after his ill mother.

However, Orville was determined to try new things, and his enthusiasm helped draw his brother Wilbur into new projects. In 1889, they designed and built a printing press which, for a short time, published a daily newspaper.

In 1892, the capitalised on the 'safety bicycle' boom and opened a bicycle shop; this was commercially successful and also enabled them to develop their skills as designers and engineers.

Around the turn of the century, there was considerable interest in the possibility of flight. Most of this centred on gliders. But, the Wright brothers began to explore the possibility of mechanised flight with heavier than air aircraft. For both brothers, the dream of flying became an all-consuming passion.

"For some years I have been afflicted with the belief that flight is possible to man. My disease has increased in severity and I feel that it will soon cost me an increased amount of money if not my life. I have been trying to arrange my affairs in such a way that I can devote my entire time for a few months to experiment in this field."



Exercise 3. Put the sentence True ore False

1.The Wright brothers – Orville and Wilbur Wright are credited with building and flying the first heavier than air aeroplane. _____
2. Around the turn of the village, there was not considerable interest in the possibility of flight. _____
3. Around 1889, Wilbur became withdrawn after sustaining a facial injury during a game of ice-hockey. _____
4. This basic principle is still used today. It was for this control mechanism that the Wright's received their first US patent – 821,393. _____
5. Orville and Wilbur had two elder brothers Reuchlin (1861-1920) and Lorin (1862-1939), and a younger sister Katharine (1874-1929). _____
6. For some years I have not been afflicted with the belief that flight is possible to man._____

Exercise 4. Match the answers.

1. on 17 December 1903	, Wilbur became withdrawn after sustaining a facial injury during a game of ice-hockey.
2. Around 1885	they designed and built a printing press which, for a short time, published a daily newspaper.
3. . In 1889	, the capitalised on the 'safety bicycle' boom and opened a bicycle shop; this was commercially successful and also enabled them to develop their skills as designers and engineers
4. In 1892	They achieved the first recorded flight

Exercice 5. Put necessary words.

Around 1885, Wilbur _____sustaining a facial injury during a game of ice-hockey.
However, Orville was determined to try new things, and _____ draw his brother Wilbur into new projects.
In 1892, the capitalised on the 'safety bicycle' boom and opened a bicycle shop; this was commercially _____ them to develop their skills as designers and engineers.
Their father encouraged _____ to read widely and discuss issues.
They later commented that this helicopter _____ and they sought to build similar models themselves.
When they were young, _____ them a small 'helicopter' – built in France.

Exercice 6. Match the ending with the beginning of the sentences.

1. The Wright brothers – Orville and Wilbur Wright are credited with building	a) and a younger sister Katharine (1874-1929).
2. Orville and Wilbur had two elder brothers Reuchlin (1861-1920) and Lorin (1862-1939),	b) Wright brothers to pursue a range of interests and studies. When they were young, their father bought them a small 'helicopter' – built in France
3. Their father encouraged his children to read widely and discuss issues. This climate of intellectual creativity and stimulus encouraged the	c) commercially successful and also enabled them to develop their skills as designers and engineers.
4. In 1892, the capitalised on the 'safety bicycle' boom and opened a bicycle shop; this was	d) sparked an interest in flight and they sought to build similar models themselves.
5. . When they were young, their father bought them a small 'helicopter' – built in France. They later commented that this helicopter	e) Wright's received their first US patent – 821,393.
6. This basic principle is still used today. It was for this control mechanism that the	f) and Susan Catherine (Koerner) Wright (1831-1889).
7. Their parents were Bishop Milton Wright (1828-1917)	g) and flying the first heavier than air aeroplane.

 **Listening task**

1.Listen to the text and circle the right answer.

1.Who was the first to use experiment and observation as the basis of science
a)Europeans b)Muslims c)Greek scientists

2.Which of great scholars is regarded as the architect of the scientific method?
a)Ptolomey b)Aristotel c) Al-Haytham
3. How many stages of scientific method did Al-Haytham involve?
a) 6 b) 5 c) 7

2.Listen to the text again and put in order the stages of scientific method.

1	Test the hypothesis through experimentation	a
2	Stating a definite problem	b
3	Publish the findings	c
4	Observation of the natural world	d
5	Interpret the data and draw conclusions	e
6	Formulating a robust hypothesis	F
7	Assess and analyze the results	g

Unit 2 Lesson 3. Leonardo da Vinci

Future Perfect Progressive

Exercise 1.Look at these sentences and tick the lasting action.

► ***Gulnoza will have been working at her diploma work for six months by the first of May.***

► ***Feruza will have finished hers by that time.***

1.They will have painted the wall by the time we come. √

2.The police will have been searching thieves for three days on Sunday. ☐

3.The Drug Store will have been closed by the time you get there. ☐

4.The workers will have built a new theatre by the end of the year. ☐

4.The girls will have been tiding the house for two hour by the 5 o'clock. ☐

5.The lecture will have begun by the time Dilshod gets there. ☐

6.Zamira will have been learning Spanish for three years by June. ☐

7.The editor will have been checking the articles for four hours when Boss comes. ☐

Exercise 2.Answer the sentences correctly.

1.Has he done his work?

1. Yes, he did b. Yes, he has c. Yes ,he done

2.Is he still drawing the picture?

a. Yes, he has b. Yes, he is c. Yes he does

3.How long has she been waiting for her friend?

a. Yes , she has b. For 2 hours c. No, she has not

4. Could they know about this accident?

a. Yes ,she can. b. No, they couldn't. c. Yes, she could.

5.Had the Brians had enough time to visit Tashkent?

a. Yes, she did. B. No they hadn't c. Yes ,they have

6.Had it been raining for a long time when they arrived?
a. Yes ,it was b. No , it hadn't. c. Yes, it hasn't been.
7. Will you have written your report by that time?
a. Yes, you will . b. No, I shall not. c. Yes, I have.

Exercise 3.Put correct form of the word.
1.Edna speaks English *fluent/fluently*.
2.Fiona's dress is *beautiful/beautifully*.
3.Polly drives the car *slow/slowly*.
4.Paul has a *noise/noisy* neighbor.
5.Sam has a *difficult/difficulty* in spelling .
6.Her speech is *excellent/excellently*.
7. John carries the glasses *careful/carefully*.
8.Helen has her *usual/usually* day in her office every day.

Exercise 4. Who are they? What will they have been doing?

Paul and Lindsey 1. _____on a sleigh ride to their friend's house2._____ the weekend. The snow 3. _____ deep, but their horse is very strong. They are going to travel a long way. They will have been riding in the sleigh for over an hour by the time they 4. _____. Paul's horse, Midnight, will pull the sleigh 5. _____ the snow. When they arrive, Midnight will be tired because he is going to 6._____ the sleigh for over an hour. Midnight will need food and rest because he 7_____ the sleigh over all that snow.
1.A. are going b.is going c. were going d. went
2. a since .b. for c. during d.at
3. a shall be .b. are c. will be d. was
4. a .arrived b. will arrive c. arrives d arrive
5. a. over b. on c .above d. under
6. a. have pulled b. have been pulling c. were pulling d. pulled
7. A. have pulled b. were pulling c. will have been pulling d. pulled

Leonardo da Vinci

Simply put, Leonardo da Vinci was an amazing man. He was an accomplished painter, a great inventor who designed a slew of stunning things, and a path-breaking scientist who was a bridge between the medieval times and modern approach.

Particularly known for his masterly pieces The Last Supper and Mona Lisa, Leonardo da Vinci was a genius, of all times. Here is the short biography and profile of Leonardo da Vinci.

Leonardo da Vinci Childhood

Leonardo was born on April 15, 1452, in Vinci, Italy. Vinci was located in the lower valley of the Arno River in the territory of Florence. For his first five years, Leonardo lived in the nearby hamlet of Anchiano with his family which was comprised of his father, grandparents and uncle. In his childhood, Leonardo had access to scholarly texts owned by his family. He was also exposed to Vinci's longstanding painting traditions. When he was 15, his father apprenticed him to famous workshop of Andrea del Verrochio in Florence. As an apprentice, Leonardo got trained in diverse skills.

Leonardo was always hesitant in throwing light on his childhood. In all his accounts, very little is available about his childhood.

Leonardo as Artist

Leonardo, a God-gifted artist, had his skills honed at the workshop of Verocchio. With time, he surpassed his master. By the time Leonardo reaching his twenties, he became a famous painter. Leonardo sought a universal language in painting. With re alistic elements, Leonardo created faithful renditions of life.

Leonardo believed that a painter must know not just the rules of perspective, but also the laws of nature. Painter is the best person to illustrate the laws of nature.

Two of his most famous paintings are Mona Lisa and The Last Supper. Mona Lisa is known for her mysterious smile while The Last Supper is praised for experimental technique. Michelangelo, another great artist, was the competitor of Leonardo.

Leonardo as Inventor

For supporting himself, Leonardo adapted his drawing skills to the fields of architecture, military engineering, canal building and weapons design. A talented engineer, Leonardo planned to create new machines for a new world. An array of Leonardo designs were based on gear. His designs included the bicycle, a helicopter, an auto-mobile, and some strange weapons. He made plans for a device to measure humidity, a steam-powered cannon, different waterwheels, and industrial machines powered by flowing water. He made some ambitious plans to revitalize Milan with canals.

Leonardo as Scientist

The range of topics which he studied is surprising: anatomy, zoology, botany, geology, optics, hydrodynamics, aerodynamics and much more. Leonardo was influenced by the writings of the ancient Greeks and Romans. However, he knew the limitations of these and took the approach of observing nature and posing logical questions.

Leonardo possessed the ability to observe nature and record it. His studies heralded the birth of the systematic, descriptive method of scientific study.

Leonardo returned to Florence in 1500. In 1502 Leonardo entered the service of Cesare Borgia, the son of Pope Alexander VI, as a military architect and engineer.

He spent two years painting a great mural of The Battle of Anghiari. In 1506, he went to Milan and thereafter, in 1513, to Rome. He fell ill and spent most of his time solving geometric puzzles. He could not recuperate and died quietly on the 2 May, 1519 just a few weeks after his 67th birthday.

Exercise 5. Rearrange the following words.
Altarwork, shoppiece, aeropowered, steandynamics, steamwheels, waterpowered, Grandstanding, longsparents, pathlike, life-breaking.

Exercise 6. Choose suitable continuation.

1. Leonardo created a silver lyre in the shape of ……. .
a) sheep's head
b) a horse's head.
c) bull's head
d) pig's head
2. Leonardo turned to science for improving his …… .
a) network
b) seatwork
c) workshop
d) artwork
3. Mona Lisa is known for her ……. .
a) cooking skills
b) bad habits
c) mysterious smile
d) loud laugh

Exercise 7.Choose the best answer.
.Which action happened first?
1.By the time Leonardo reaching his twenties, he became a famous painter.
Leonardo was twenty years old **b**. he became a famous painter.
2. Leonardo returned to Florence when he was..
a. thirty five b forty eight
3.He visited …… when he was 51.
a. Italy b. Spain
4.He stopped studying the writings of the ancient Greeks and Romans because…
a. a. it was not interesting any more b.it was limited science

Exercise 8. Work in groups. Prepare presentation on the topics:
Group 1 –**Leonardo's childhood**
Group 2 - **Leonardo as an Artist**
Group 3 - **Leonardo as an Inventor**
Group 4 - **Leonardo as a Scientist**

Exercise 9. Fill in Leonardo's Timeline

1452	
1467	
1472	
1478	
1481	
1482	
1483	
1485	
1498	
1500	
1502	
1503	
1503	
1515	
1519	

LISTENING TASK

1.You will hear the text about the great Polymath Ibn Sina. Complete the notes below

1.Avicenna, was a true polymath who excelled in many academic fields, including philosophy, _____, _____ and natural sciences.
2. His publication, '_____,' became a core text for physicians across the Islamic world and Europe, laying out a detailed guide for diagnosing and treating _____.

3. His other breakthrough was based upon his belief that ____ _____ was responsible for many ailments, he included guidelines on how to check the purity of water.
4. He had many more ____ than _____ and contributed greatly to the history of medicine.

2.Listen to the text again and decide whether the sentences true or false.

1. From a young age, he gained renown as a physician and teacher. True/False

2. Ibn-Sina believed that many diagnoses could be made by simply checking the pulse and the urine. False/True

3. Many of his remedies were ultimately effective. True/False

Unit 3. Lesson 1 Galileo Galilei

Grammar:Infinitive

Non-finite forms of the verbs.

Infinitive

Infinitive- non-finite form of the verb usually followed by 'to'.
Henry decided **to go** to the party
The stranger stopped **to ask** me where the theatre was.
She came here **to meet** with you.
A. After the following verbs we use to+infinitive. Here are some more examples.
Tom expects to get his papers back .
Students agreed to work at course papers on Sunday.
I can't afford to go abroad this year.
My friend offered to help me with my housework.
We can put 'not ' before to+infinitive, thus forming negative.
*At last we decided **not to buy** that car.*
*Some young couples choose **not to have** children.*
B. We use to+infinitive after ***seem, appear, tend, manage, fail***, and also after
he promised to go, his promise to go.
He seems to have proof of his actions.
Simon appears to be a good engineer.
Pete tends to come late for the lesson on Mondays.
Susan managed to finish her Master work in time.
Lucy failed to pass her exam in Physics yesterday.
The editor promised to publish the article next Friday.
The editor forgot about his promise to publish the article.

Exercise 1.A. Say what each speaker did. Use the following verbs before to + infinitive: *decide, promise, offer, demand, threaten, can't afford*

►Emma: You are not right. I must speak to your principal.

► *Emma demanded to speak to the principal*

David : I 'll never be late for the lessons. I promise

_____

The Davidsons: OK. We 'll buy this house. It's really cozy.

_____

Harriet: I can look after your children, if you are busy.

_____

Rachel to her neighbor: If you don't stop making noise I'll call police.

_____

Rita:I don't think I can buy this dress.It's too expensive.

_____

Exercise 2.B. Insert proper word in blanks

Tend, manage, fail, to promise to do, one's promise to do

1.Lora _____ to be in time at the meeting.
2.Daniel _____ to pay his rent in time. Now he has to look for another apartment.
3.Vicky _____to pack all his things. Now he is ready to go to the station.
4.Mark _____ to help his brother at 3 p.m. But he didn't keep his _____ to help him as he was playing football at that time.

Exercise 3 Multiple choice

1. We expect him ------- tomorrow.

○ arrive ○ be arriving ○ to arrive ○ to have arrived

2. You can't make him --------- it.

○ do ○ doing ○ done ○ to do

3We are ready ------

○ to be beginning ○ to be begun ○ to begin ○ to have begun

4. This report must--------- as soon as possible. It's urgent!

○ be sent ○ have been sent ○ have sent ○ send

5. I asked him, but he pretended and didn't answer. (Correct)(Incorrect)

Exercise4 Put in the verbs in brackets in the Gerund or the to-infinitive

I can't imagine Peter _____ ***(go)*** by bike.

He agreed _____ ***(buy)*** a new car.

The question is easy _____ ***(answer)***.
The man asked me how _____ ***(get)*** to the airport.
I look forward to _____ ***(see)*** you at the weekend.
Are you thinking of _____ ***(visit)*** London?
We decided _____ ***(run)*** through the forest.
The teacher expected Sarah _____ ***(study)*** hard.
She doesn't mind _____ ***(work)*** the night shift.
I learned _____ ***(ride)*** the bike at the
Exercise 5 Rewrite these sentences using the infinitive of purpose.
Example I went to Holland because I wanted to see the tulips. → *I went to Holland to see the tulips.*

1. **I'm going to Moscow because I want to see the Kremlin.**
2. Paul is going to London because he wants to buy some clothes.
3. Roger went to India because he wanted to visit the Taj Mahal.
4. Tracey often goes to the disco because she wants to dance.
5. Tim is going to America because he wants to see the Niagara Falls.
6. Frank is learning French because he wants to get a better job.
7. Peter is saving money because he wants to buy a car.

Galileo Galilei

Galileo Galilei, an Italian astronomer, physicist, mathematician and philosopher, is one of the most important names in modern astronomy. As a matter of fact, he is hailed as the "father of modern observational astronomy", "father of modern physics", the "father of science", and the "father of Modern Science." With these monikers, along with his achievements and contributions to science and

the society, Galileo Galilei is one of the most notable figures in history.
He was born on February 15, 1564, in Pisa, Italy. His father was a wool trader/musician, who wanted his son Galileo, to be medical practitioner, as doctors before certainly make a lot of money. At age 11, Galileo was sent off to study in a Jesuit monastery.
Galileo Galilei was born in Pisa, Italy on February 15, 1564. He was the oldest of seven children.. He went to University of Pisa for his college education, but he got bored and left without a degree.
Despite this, Galileo's ingenuity made a lot of contributions to what is now we refer as "technology" as distinct from pure physics. His theoretical and experimental work on the motions of bodies was also one of the precursors of the classical mechanics developed by Sir Isaac Newton.
Galileo built on the work of others to create a telescope with around 3x magnification, he later improved on this to make telescopes with around 30x magnification.
With these telescopes, Galileo was able to observe the skies in ways previously not achieved. In 1610 he made observations of 4 objects surrounding Jupiter that behaved unlike stars, these turned out to be Jupiter's for largest satellite moons: Io, Callisto, Europa and Ganymede. They were later renamed the Galilean satellites in honor of Galileo himself.

Exercise 3.Choose the correct option

►***His father was a wool ……..***

√***a.1.merchant/musician b. famous musician c. famous doctor***

1.Galileo Galilei was famous for his contribution in……

4 sciences b.2 sciences c. in all sciences

2.His father wanted him to become physician because it was…..

a. well paid b. well honoured c. well known

3. The motions of bodies were first discovered by……

a. G. Galilei b. I.Newton c. A. Einstein

4. What kind of fact about telescope is given in the text?

a. He created it b. He was presented it c.He found it

5.He made observations and discovered that…….

a. Jupiter was surrounded by moon b.by four objects c.by stars

Exercise 4. Fill in the table.

Person	Noun	Adjective	Adverb
astronomer	***Astronomy***	***Astronomical***	***astronomically***
physicist,			
mathematician			
Philosopher			
Astronomer			
Doctor			
Physician			
Mechanic			

Exercise 5.Correct mistakes in the sentences.

►***He decided to go not that way.***

He decided not to go that way

1.His Father wanted that his son was a doctor.

_____

2. He was sent off studying mathematics in a Jesuit monastery.

_____

3. With these telescopes, Galileo was able to observed the skies.

_____

4. These turned out to be Jupiter's four largest satellite moons.

_____

5.Those times many people studied medicine to make much money.

_____

Listening task

1.Listen to the text and circle correct answer.

1.When the scientist want to explain the things happen around us they…

a)watch TV b)first think c) observe something happening.

2.After they observation they…

a)ask permission to explain it b)put together hypothesis c)make analyses

3.At the end of the scientific method they …..

a)they predict b)go to fortune- teller c)test the predictions

4.What is their further action if the hypothesis is wrong?

a)they give up doing observation b)go to church to pray c)they start again

2.Listen to the text again and put the words in right order to make sentence.

1. pretty scientists are curious generally.

2. he explanation Then based that /she will on begin to make predictions.

3. proven the wrong hypothesis is If, again he/she start the process will

Unit 3 **Lesson** 2Thomas Edison

Grammar: Verb+ing forms

After some verbs we can use an ing- forms, for example *enjoy, mind, can't or couldn't help(resist, face, stand),keep on ,carry on*
*I **enjoy listening** to classical music.*
*We **don't mind walking** to the office.*
*The girls **couldn't help laughing** at his joke. It was so funny.*

*The hat was so beautiful. Sarah **couldn't resist buying** it.*
*Let's have a rest. I **can't face walking** any more.*
*The secretary asked him not to wait but he **kept on waiting**.*
***Carry on boiling** the herbal until the water becomes brown.*
These verbs are followed by an ing-form:
Admit, avoid, delay, deny, detest, fancy, give up, imagine, involve, justify, put off, tolerate ,risk, save
Exercises 1 Choose infinitive or ing-form
1. The student admitted_____ (cheat) during the exam.
2. I decided _____ (phone) him immediately.
3. His parents delayed _____ (send) him the telegram.
4. Do you fancy_____ (go) to see a movie sometime?
5. Nancy tend _____ (get) very involved in her work.
6. Rupert won't tolerate _____ (smoke) in the office.
Verb + ***-ing*** or infinitive?
Some verbs can be followed by either **-ing** form or the infinitive and the meaning of the verb changes. Here are some common examples:

I remember sending them the cheque.	I sent and I can remember now that did it.
I remembered to send them the cheque.	I remembered, and then I sent it.
I will never forget meeting the President.	I met him, and he impressed me.
I won't forget to give her your message.	I have made a note of it, and I will give it to her when I see her.
We have stopped dealing with that firm.	We used to deal with them, but we don't deal with them any more.
At 12.00 we stopped to have a break	We stopped for a break.
I regret saying that I was not interested in the work.	I said I was not interested in the work, and I now think that was a bad mistake.
I regret to say that we will not be able to give you a contract.	I am sorry that I have to say this.
If the printer doesn't work, try	Do this and see what happens.

turning everything off and then starting again.	
I will try to negotiate a better deal.	I will make an effort to do this.
This advertisement needs redesigning.	This advertisement needs to be redesigned.
We need to increase productivity	It's necessary to increase productivity.

Exercise 2.Fill in the blanks of the text with the given words.

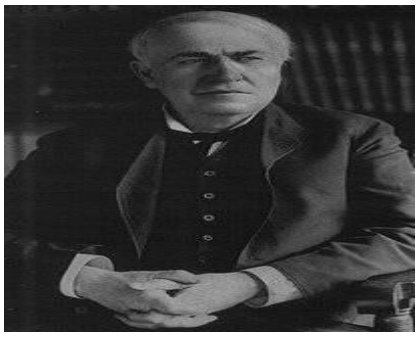
A .Jump, b.flying, c.using, d.slowing, e.falling, f.skydive, g.slow down, h.to fall, i.airplane,j. tall tree, k. balloons

PARACHUTE

A parachute is a device for 1. _____one's descent while2._____ to the ground. Parachutes are used to 3._____ from airplanes, 4_____ from very high places, and to help 5. _____the descent of spacecraft. Parachutes are also used to slow down some race cars. The early parachutes were made from canvas (a strong cotton cloth). Light-weight (but very strong) silk cloth was then introduced for parachutes. Modern-day parachutes use nylon fabric.

The idea of 6.using a parachute 7._____ gently to the ground was written about by Leonardo da Vinci (1452-1519). The first parachute was demonstrated by Louis-Sébastien Lenormand in 1783 of France - he jumped from a very 8._____ carrying two parasols (umbrellas). A few years later, some adventurous people jumped from hot-air 9. _____using primitive parachutes. The first person to jump from a flying 10._____ (and survive the fall) was Captain Albert Berry, who jumped from a U.S. Army plane in 1912. Parachutes were first used in war towards the end of World War 1.

Thomas Edison



Edison is the great inventor who has over 1000 patents and his inventions are in various fields used in our daily life. In his early life he was thought to have a learning disability and he could not read till he was twelve and later he himself admitted that he became deaf after pulling up to a train car by his ears. He first could able to turn the attention of the world after inventing Phonograph. His one of the most popular invention is the Electric Bulb. He also developed the telegraph system. His

invention of carbon telephone transmitter developed the carbon microphone which was used in the telephoned till 1980. He also became a prominent businessman and his business institution produced his inventions and marketed the products to the general people.

Exercise 3. Continue the list of words formed with the help of suffix " able" Translate them.

▶

1. affordable
2. profitable
3. ……
4. ……
5. ……
6. ……

Exercise 4. Explain the difference of the words.

▶

1. A scientist is a person, who…….
2. An inventor is a person , who…
3. A physician is a person, who…
3. A physicist is a person, who…
4. An artist is a person , who …
5. An actor is a person , who …
6. An astrophysicist is a person , who …

Exercise 5. Guess the name of a person, who had done it.

1. **He** did not invent the automobile but invented methods of mass producing automobiles.
2. **He** sent people all over the world to look for plant materials that could be used in his experiments.
3. **He** discovered that carbon would glow when it received an electrical current.
4. **He** discovered that a carbon paper filament would glow better but was not long-lasting.
5. **He** used methods similar to his friend.
6. **He** created products that people wanted, that they could afford, and that he could manufacture for a profit.
7. **They** believed this was possible if nothing was plugging the holes in the outlets.
8. **They** bought them and felt a lot better and more comfortable.

Listening task

1.Listen to the text and unjumble the words

1	arosphemet	
2	usegrehoen	
3	Oxidide	
4	ethamne	
5	lecmosule	
6	Leasere	
7	gennitor	
8	Tribeconut	

2.Listen and decide which sentence is True , False, Not Given.

1.There are three types of greenhouse gases. **T/F/NG**

2.The vibrating molecule will release the radiation. **T/F/NG**

3. The radiation will likely be absorbed by another greenhouse gas molecule. **T/F/NG**

4.The two atoms in these molecules aren't bound together tightly and unable to vibrate **T/F/NG**

5.Molecules cannot absorb heat and contribute to the greenhouse effect. **T/F/NG**

6.We must protect our nature from greenhouse gases. **T/F/NG**

Unit3 Lesson 3 Alessandro Giuseppe Antonio Anastasio Volta

Grammar: Passive voice

Forming of the Passive to be + v3
Active: Volta developed electric battery
Passive: Electric battery was developed by Volta

ACTIVE	**PASSIVE**
She cleans the room	**The room is cleaned**
She is cleaning the room	**The room is being cleaned**
She has cleaned the room	**The room has been cleaned**

She cleaned the room	**The room was cleaned**
She was cleaning the room	**The room was being cleaned**
She had cleaned the room	**The room had been cleaned**
She will clean the room	**The room will be cleaned**
She will have cleaned the room	**The room will have been cleaned**

Exercise 1.Change into Passive

Exercise 1► My friend tore my book. My book was torn.

1.His parents sent him to Jesuit school

_____

2.He learned two poems.

_____

3.They will build bridge next year.

_____

4.Teacher is explaining the rule.

_____

5.The family bought a new car.

_____

6.The students will have passed exams.

_____

7.My friends had won the competition.

_____

8.Aut Polly took care of the old man.

_____

Exercise 2.Change into Active

►Fox is hunted for its fur ►Hunters hunt fox for its fur

1.This house is built of bricks

_____

2.My sweater is made of wool.

_____

3.This car was produced in Italy.

_____

4.The letter was sent from Havana.

_____

5.The score was announced by coach.

_____

6.Her bag was stolen.

_____

7.My parents had been invited to the party.

_____

Exercise 3 Rewrite the following sentences as suggested:

The boy writes poems.

The girl drove the blue car.

They have collected enough money.

They will open a new restaurant.

The little boy can draw pictures.

The guard watched the prisoner.

They will not play soccer.

They believe that he writes good poems

Exercise 4.Insert the verbs in Passive voice.

Letters _____ by the postman at 8 every day. (deliver)

This bag _____ in the bus yesterday. (find)

The dress _____ in hot water. (cannot wash)

_____ your motorbike _____ yet? (repair)

The message _____ tomorrow. (send)

These offices _____ now. (clean)

This report _____ in time if you didn't help me. (not finish)

Why _____ the TV _____ ? (turn on)

This building _____ since the 1930's. (not reconstruct)

Bags _____ in the cloakroom. (must leave)

The engine _____ just _____ when the manager saw it. (test)

The last umbrellas _____ in the morning. (sell)

Exercise 5 Multiple choice

1.A new book by that company next year.

a)Will publish b)will be published c) is publishing

2.The secretary to her new boss yesterday.

a) introduced b)was introduced c)is introduced

3. Our plan by the members of the committee.

a)considers b)is being considered c)is considered

4. Detroit Motown in the past.

a)was called b)is called c)called

5. The house by a pop star.

a)bought a)was bought c)have bought

Exercise 6.Read the text and discuss the text.

Alessandro Giuseppe Antonio Anastasio Volta

Volta was Italian physicist and he is best known for his contribution to the development of electric battery. This benevolent scientist is also regarded as one of the founder of the electric age. His parents sent him to the Jesuit school intending to make him a Jurist. He also taught in the University of Pavia for 25 year. After that in 1800 he could make voltaic pile which could produce steady electric current. He then worked on to develop the electric bulb. For his work in the electric development he was given a count by Napoleon. Emperor of Austria honored him naming him a professor of Philosophy at Padova. For his honor an electric unit Volt was named after him.

Exercise 3. Choose the correct answer.

► ____ *was Volta?* *-He was Italian physicist.*

What was Volta?

1._____is regarded as one of the founder of the electric age? **- Alessandro Volta.**

2._____ was he sent to the Jesuit school? -His parents want him to become a legal expert.

3._____did he teach in the University of Pavia? -For twenty five years.

4. _____voltaic pile did he make? -It could produce steady electric current.

5._____was the reason of giving him a count by Napoleon?
- His work in the electric development.

6. _____ honored him a professor of Philosophy at Padova?
- Emperor of Austria.

Exercise 6.Divide the words into parts of speech.

Synthetic, commercially, successful, photographic , soften, creation, uses, stockings, non-stick, non-stick, neoprene.

Exercise 7.Answer the questions.

1. When was plastic invented?
2.Where was it used initially?
3. What kind of plastic articles are produced nowadays?

1.Listen to the text and answer the questions.

1.What is the color of metal in the periodic table?

a)blue b)green c)orange d)red

2. What property doesn't belong to metals?

a) shiny b) very dense c) melt at high temperatures d)break easily

3.What is not true about nonmetals?

a) dull and don't conduct heat and electricity.

b)have low density and melt at low temperatures.

c) brittle and will break.

d) very flexible

2.Listen to the text and fill in the gaps

1.Metals will _____, gradually wearing away, like rusting _____.

2. Their surface is _____ and they don't conduct _____ and electricity.

3. Elements that have properties of both metals and nonmetals are called _____.

4. Electricity and heat can travel _____ metalloids but not as easily as they travel _____ metals.

Unit 4. Lesson 1 Plastic

Grammar:Gerund

Gerund

A gerund is a noun formed from a verb which refers to an action, process, or state. In English, gerunds end in `-ing', for example `running' and `thinking'.
Samples of Gerund:
She walked on without ***turning*** her head
I think of ***going*** to Paris
I like ***swimming***
I don't remember ***having*** heard (hearing) the legend before
He is proud of ***having*** won (winning) the first place
It's difficult ***finding*** your way around in a strange town
It's a nightmare ***worrying*** where the children might be

	Gerund Active	**Gerund Passive**
	I like inviting my friends to my house	**I like being invited by my friends**
	John remembers having shown me the book	**John remembers having been shown the book —**

Exercises 1Complete the sentences with the gerund form of the verbs in parentheses.
She is good at (dance) .
He is crazy about (sing) _____.
I don't like (play) _____cards.
They are afraid of (swim) _____in the sea.
You should give up (smoke) _____.
Sam dreams of (be) _____a popstar.
He is interested in (make) _____friends.
My uncle is afraid of (go) _____by plane.
We insist on (cook) _____the dinner ourselves

Exercises 2 Multiple choise
He _____ that our meeting was cancelled.
stated
asked
preferred
wanted
She seldom _____ of sending money to her parents.
wants
forgets

thinks
suggests

He _____ that he was hungry.
spoke
ventured
asked
said

She seldom _____ to play the guitar.
would rather
knows
had better
pretends

She _____ learn irregular verbs by heart.
is
minds
had better
insists

Exercise 3. Read and translate the text.

Plastic

The first truly synthetic plastic was invented by Leo Baekeland - a Belgium chemist living in New York. Baekeland was already very rich as he had invented the first commercially successful photographic paper and sold it to George Eastman in 1898 for $1 million. With such money, Baekeland could engage himself in whatever research he decided to do.

In 1905, he found that when he combined formaldehyde and phenol, he produced a material that bound all types of powders together. He called this material Bakelite - after himself - and it was the first thermosetting plastic in the world. This was a material that once it set hard would not soften under heat. It had so many uses and so many potential uses, that it was called "the material of a thousand uses".

Bakelite was water and solvent resistant; could be used as an electrical insulator; was rock hard but could be cut by a knife and was used in 78 rpm records and telephones.

New plastics were invented such as neoprene in 1932, polythene in 1933 and Perspex in 1934. One of the most famous wholly synthetic fibers was invented in 1938 at the

cost of $10 million - nylon. In the first year of its creation, nylon went into toothbrush bristles and nylon stockings. 64 million pairs of stockings were made in 1938 alone. Nylon was also used by the military in World War Two for gearing wheels in vehicles and parachute cords.
Plastic as a whole was very important in World War Two. ‘Plane cockpits were made of Perspex, polythene was used in insulate radar and plastic was used to make synthetic rubber for tyres.
More modern plastics include Teflon (used in non-stick pans), lycra (used initially in sports wear), Dacron (crease and rot-resistant material used in sailing and tents). All these have a background in the work done by Baekeland and his Bakelite.

Exercise 6.Divide the words into parts of speech.

Synthetic, commercially, successful, photographic , soften, creation, uses, stockings, non-stick, non-stick, neoprene.

Exercise 7.Answer the questions.

1. When was plastic invented?
2.Where was it used initially?
3. What kind of plastic articles are produced nowadays?

SPEAKING:

Exercise 8.1.Look at the pictures and write where else polythene, neoprene, perspex is used.

non-slip shockproof 5mm neoprene rubber sheet

hypalon neoprene rubber sheets

High Quality Colorful Neoprene SBR Sheet

neoprene rubber sheet fabric

Figure 2 Poly(ethene) is used to make large water pipes

–

Figure 3 - and far smaller pipe

Uses of Perspex:

Listening task

1.Listen to the text and decide which sentence is True, False or Not Given.

1.A wrench is a universal industrial machine. **T/F/NG**

2. Shorter the tool, the maximum of force you can use to tighten a smaller nut. **T/F/NG**

3.Open end wrenches are the easiest and quickest wrenches. **T/F/NG**

4.Combination wrenches have an open-end jaw at one end and box-end jaw at the other.

T/F/NG

5.Most commonly used types are crescent and monkey wrench. **T/F/NG**

2.Listen to the text and complete the sentences below.

1.A wrench turns nuts, bolts,_____,

2.The jaw's thin wall makes the nuts _____ even in tight spaces.

3._____ wrenches are low cost and most widely used.

4.Most commonly used types are _____ and _____ wrench.

UNIT 4 **Lesson 2** Lathe

Grammar: Conditional sentences TYPE 1

In a Type 1 conditional sentence, the tense in the 'if' clause is the simple present, and the tense in the main clause is the simple future.

If clause (condition)	**Main clause (result)**
If + simple present	**simple future**
If this thing happens	that thing will happen.

As in all conditional sentences, the order of the clauses is not fixed. You may have to rearrange the pronouns and adjust punctuation when you change the order of the clauses, but the meaning is identical.

Examples

If it rains, you will get wet.
You will get wet if it rains.
If Sally is late again I will be mad.
I will be mad if Sally is late again.
If you don't hurry, you will miss the bus.
You will miss the bus if you don't hurry.

Exercise 1.Complete the Conditional Sentences (Type I) by putting the verbs into the correct form.

If you (send) [send] this letter now, she (receive) [will receive] it tomorrow.
If I (do) [ ] this test, I (improve) [ ] my English.
If I (find) [ ] your ring, I (give) [ ] it back to you.
Peggy (go) [ ] shopping if she (have) [ ] time in the afternoon.
Simon (go) [ ] to London next week if he (get) [ ] a cheap flight.

If her boyfriend (phone / not) _____ today, she (leave) _____ him.
If they (study / not) _____ harder, they (pass / not) _____ the exam.
If it (rain) _____ tomorrow, I (have to / not) _____ water the plants.
You (be able/ not) _____ to sleep if you (watch) _____ this scary film.
Susan (can / move / not) _____ into the new house if it (be / not) _____ ready on time.

Exercise 2.Put the verbs in correct form of the verb.

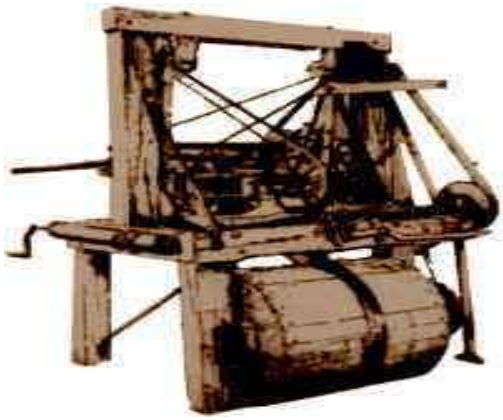
If I _____ ***(to study)***, I _____ ***(to pass)*** the exams.
If the sun _____ ***(to shine)***, we _____ ***(to walk)*** into town.
If he _____ ***(to have)*** a temperature, he _____ ***(to see)*** the doctor.
If my friends _____ ***(to come)***, I _____ ***(to be)*** very happy.
If she _____ ***(to earn)*** a lot of money, she _____ ***(to fly)*** to New York.
If we _____ ***(to travel)*** to London, we _____ ***(to visit)*** the museums.
If you _____ ***(to wear)*** sandals in the mountains, you _____ ***(to slip)*** on the rocks.
If Rita _____ ***(to forget)*** her homework, the teacher _____ ***(to give)*** her a low mark.
If they _____ ***(to go)*** to the disco, they _____ ***(to listen)*** to loud music.
If you _____ ***(to wait)*** a minute, I _____ ***(to ask)*** my parents.

Lathe

Lathes represent one of the earliest machine tool families and were probably in use as early as 700 B.C. The invention of the cord drive for the rocking drill--the first mechanical cutting tool--made possible a similar drive system for the lathe, which in its simplest form is a tool used to support and rotate any material for the purpose of shaping by a cutting instrument. The many lathes that followed the ancient Etruscan, Egyptian, Syrian, and Greek rotary lathes made advances in at least one of three areas: 1) increased rigidity of the lathe spindle or axis; 2) increased power and efficiency of the drive mechanism; 3) progressive elimination of hand operations. First came the pole lathe, around the twelfth century. The distinctive feature of this machine was a foot-operated treadle attached to a spring pole to drive the lathe spindle.
The most significant developments in lathe manufacture occurred after a gradual conversion to all-metal components, which began around the mid-eighteenth century. The oldest all-metal lathe, circa 1751, was that built by Jacques de Vaucanson (1709-

1782), for use in his loom machines. The Vaucanson lathe is also credited as being the first slide lathe, used expressly for cylindrical turning of metal pieces and characterized by prismatic slide bars.
In 1797 Englishman Henry Maudslay built a screw-cutting engine lathe. Precision screws had been cut by clockmakers on lathes since the late 1400s, but Maudslay's machine represented an enormous advance because of his introduction of the lead screw, geared to the lathe spindle. By adding gears and altering the lead screw speed ratio, Maudslay was able, by the end of the century, to cut a variety of thread pitches with a single machine. For his contributions, Maudslay is regarded as the *father of the industrial lathe*.
During the same period, an American named David Wilkinson (1771-1852) developed a similar screw-cutting lathe that may have been based on drawings by Leonardo da Vinci. Another American, Thomas Blanchard, first developed a lathe for producing non-symmetrical forms, such as gunstocks, and then, around 1818, a lathe that made use of a friction wheel to duplicate any of a large number of original patterns. Blanchard's machine, like Wilkinson's, was central to the development of modern manufacturing processes.

Blanchard Automated Lathe (1818)



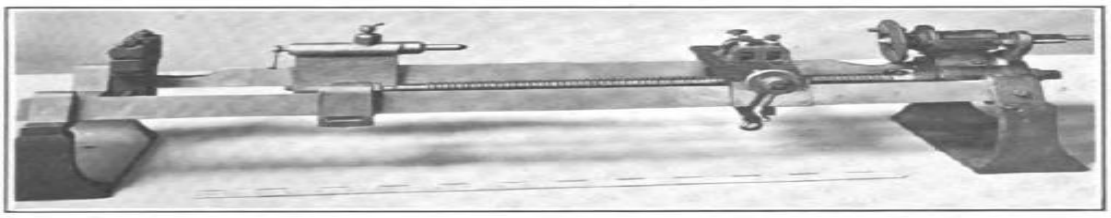


FIGURE 15. MAUDSLAY'S SCREW-CUTTING LATHE
ABOUT 1797

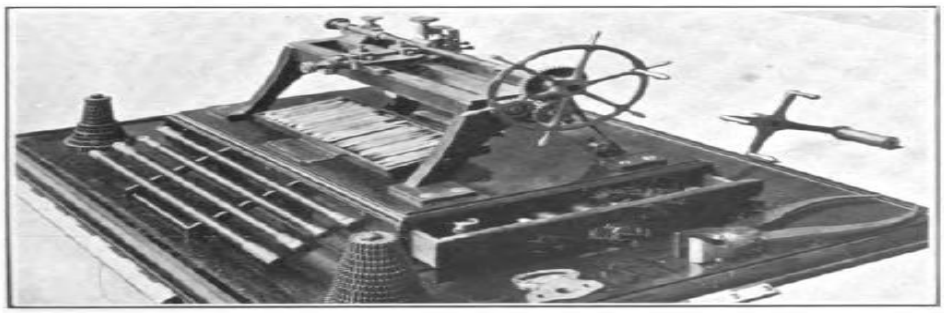


FIGURE 16. MAUDSLAY'S SCREW-CUTTING LATHE
ABOUT 1800

Exercise 3. Answer the questions.

1.What was the earliest use of lathes? 2. What are the three areas rotary lathes made advances in? 3.What kind of lathe appeared around twelfth century? 4.What was distinctive feature of that machine and its disadvantage? 5.In what way this problem was solved?6. By whom was the oldest all-metal lathe built? 7. What elements did H.Maudslay introduce to his machine? 8.What kind of lathe was developed by Th. Blanchard in 1818? 9.What can you say about modern lathes?

Exercise 4. What adjectives can follow these nouns?

1. ……. tool
2. …….. instrument
3. ……. drill
4. ……. lathe
5. ……. process
6. ……. motor
7. ……..development
8. ……. slide
9…… form
10. …….industry
11…….. pattern
12. ……. bar

Exercise 5.Explain compound words given in bold. What do they mean? Can you add extra compound words you use in your speech?

1.**foot-operated** treadle
2. **ill-suited** for cutting metal
3. **all-metal** components
4. **a screw-cutting** engine lathe

Exercise 6. Write out sentences in the text where gerund is used. Explain what is the function of the gerund.

Exercise 5.Complete the table with the types of lathes mentioned in the text.

№	Type of machine
1	*Rocking drill*
2	
3	
4	

Listening task

1.Listen to the text and circle the right answer.

1.Saws are cutting instruments equipped with a _____ blade.

a)eared b)hared c)toothed

2.A hand saw is used in _____ industry.

a)light b)heavy c)construction

3._____ saws are power tools which are used for cutting _____, metal, and wood.

a)Band/meat b) Hand/wood c)Circular/meat

2.Listen to the text and answer the questions.

1.Where are the saws used?_____

2.How many types of saws are mentioned in the text?_____

3.Which saw mentioned in the text is used for wood cutting?_____

Unit 4 **Lesson** 3 Robert Hutchings Goddard

Grammar: CONDITIONAL SENTENCES TYPE 2

In a Type 2 conditional sentence, the tense in the 'if' clause is the simple past, and the tense in the main clause is the present conditional or the present continuous conditional.

If clause (condition)	**Main clause (result)**
If + simple past	**present conditional or present continuous conditional**
If this thing happened	that thing would happen.

As in all conditional sentences, the order of the clauses is not fixed. You may have to rearrange the pronouns and adjust punctuation when you change the order of the clauses, but the meaning is identical.

Examples
If it rained, you would get wet.
You would get wet if it rained.
If you went to bed earlier you wouldn't be so tired.
You wouldn't be so tired if you went to bed earlier.
If she fell, she would hurt herself.
She would hurt herself if she fell.

Exercise 1.Complete the Conditional Sentences (Type II) by putting the verbs into the correct form. Use **conditional I with would** in the main clause.

1.If we (have) [had] ***a yacht, we (sail)*** [would sail] ***the seven seas.***

2.If he (have) [ ] more time, he (learn) [ ] karate.

3.If they (tell) [ ] their father, he (be) [ ] very angry.

4. She (spend) [ ] a year in the USA if it (be) [ ] easier to get a green card.

5.If I (live) [ ] on a lonely island, I (run) [ ] around naked all day.

6.We (help) [ ] you if we (know) [ ] how.

7.My brother (buy) [ ] a sports car if he (have) [ ] the money.

8.If I (feel) [ ] better, I (go) [ ] to the cinema with you.

9.If you (go) [ ] by bike more often, you (be / not) [ ] so flabby.

10.She (not / talk) [ ] to you if she (be) [ ] mad at you.

11.If I [ ] ***(to come)*** home earlier, I [ ] ***(to prepare)*** dinner.

12.If we [ ] ***(to live)*** in Rome, Francesco [ ] ***(to visit)*** us.

13.If Tim and Tom _____ *(to be)* older, they _____ *(to play)* in our hockey team.
14.If he _____ *(to be)* my friend, I _____ *(to invite)* him to my birthday party.
15.If Susan _____ *(to study)* harder, she _____ *(to be)* better at school.
16.If they _____ *(to have)* enough money, they _____ *(to buy)* a new car.
17.If you _____ *(to do)* a paper round, you _____ *(to earn)* a little extra money.

Robert Hutchings Goddard

Robert Hutchings Goddard (October 5, 1882-August 10, 1945) was an American physicist and inventor who is known as the father of modern rocketry. In 1907, Goddard proved that a rocket's thrust can propel it in a vacuum. In 1914, Goddard received two U.S. patents: for liquid-fueled rockets and for two- to three-stage rockets that use solid fuel. In 1919, Goddard wrote a scientific article, "A Method of Reaching Extreme Altitudes," describing a high-altitude rocket; it was published in a Smithsonian report. Goddard's many inventions were the basis upon which modern rocketry is based.

After many years of failed attempts and public ridicule, Goddard's first successful rocket was launched on March 16, 1926 from a relative's farm in Auburn, Massachusetts. It was a liquid-fueled 10-ft. rocket that he called Nell. The flight lasted 2 1/2 seconds; the rocket flew a distance of 184 feet and achieved an altitude of 41 feet.Goddard soon moved to Roswell, New Mexico, where he developed more sophisticated multi-stage rockets, rockets with fins (vanes) to steer them (1932), a gyro control device to control the rocket (1932), and supersonic rockets (1935). In 1937, Goddard launched the first rocket with a pivotable motor on gimbals using his gyro control device. Altogether, Robert Goddard had 214 patents.

Exercise 2. Complete the question.

1._____ was Goddard born? - In the USA

2._____ was R.Goddard born? - He was born in October 5, 1882.

3._____ patents did he receive in 1914? - He received two patents.

4._____ did he call his first rocket? – Nell

5._____the flight last? – 21/2 seconds.

6. _____ distance it flew? – 184 feet.

7. In _____ were multi-stage rockets developed? - Roswell, New Mexico

Exercise 3.Complete the table with necessary parts of speech.

Noun/person	**verb**	**adjective**	**Adverb**
height		*high*	Highly
physicist			
		scientific	
		sophisticated	
			successfully
inventor			
		high	

Exercise 4. Match years and work.

№	**Correct answers**	**Performed work**	**years**
1		He developed more sophisticated multi-stage rockets, rockets with fins (vanes) to steer them .	**1914**
2		Goddard proved that a rocket's thrust can propel it in a vacuum	**1919**
3		Goddard launched his first prototype rocket, called Nell.	**1907**
4		Goddard received two U.S. patents .	**1926**
5		Goddard wrote a report about his rocket engine tests and sent it to the Smithsonian Institute.	**1932**

Exercise 5. Correct the spelling.

Quidil _____

tryroce _____

Mucuva _____

thifgl _____

chulan _____

Dancetist _____

Inoventin _____

1 .Listen to the text and fill in the gaps

Plier a tool that is used for holding small objects or for bending and cutting. As they are highly useful, it is advisable to have several types in _____ _____. Pliers

have either a fixed design or adjustable design. According to the _____, different pliers are listed below:
Cutting pliers are the most commonly used pliers. Also called _____ _____, they are used for cutting wires, bolts and also to remove small nails. Channel pliers are used to working on larger objects, such as pipes, removing a _____. They are also called as angle-nose or _____pliers. Crimper/Stripper pliers are used for electrical applications, and to sheave-holes while cutting screws. Electrician pliers are designed for electrical wires. Fence pliers are used for cutting and _____ _____ from fencing. Locking pliers are similar to a wrench in functioning. They are used for pulling and twisting without grip lose. _____ _____ pliers are used for a wide range of tasks, such as cutting small-gauge wire, crafts, and jewelry work. Slip-joint pliers are used with smaller objects to _____ and get the grip of the applications. Wire Stripper pliers are used to remove the _____ _____ of wires

2.Listen again to the text and decide which statement is True,False or Not Given.

1.Plier a tool that is used for holding small objects or for bending and cutting. **T/F/NG**

2.Cutting pliers are the most commonly used pliers **T/F/NG**

3.Crimper/Stripper pliers are used for electrical applications. **T/F/NG**

4.Locking pliers are similar to a wrench in functioning. **T/F/NG**

5.Needle nose pliers are used for making holes in the needles. T/F/NG

6.Pliers are also used by housewives in their household duties. T/F/NG

7.Dentists use pliers to remove a decayed tooth.

Unit 5 LESSON 1 Konstantin Eduardovich Tsiolkovsky

Grammer CONDITIONAL SENTENCES Type 3

In a Type 3 conditional sentence, the tense in the 'if' clause is the past perfect, and the tense in the main clause is the perfect conditional or the perfect continuous conditional.

If clause (condition)	Main clause (result)
If + past perfect	**perfect conditional or perfect continuous conditional**
If this thing had happened	that thing would have happened.

As in all conditional sentences, the order of the clauses is not fixed. You may have to rearrange the pronouns and adjust punctuation when you change the order of the clauses, but the meaning is identical.
Examples
If it had rained, you would have gotten wet.
You would have gotten wet if it had rained.
You would have passed your exam if you had worked harder.
If you had worked harder, you would have passed your exam.
I would have believed you if you hadn't lied to me before.
If you hadn't lied to me before, I would have believed you.

Exercise 1.Complete the Conditional Sentences (Type III) by putting the verbs into the correct form. Use conditional II with would **in the main clause.**

If you (study) had studie for the test, you (pass) would hav it.
If you (ask) _____ me, I (help) _____ you.
If we (go) _____ to the cinema, we (see) _____ my friend Jacob.
If you (speak) _____ English, she (understand) _____.
If they (listen) _____ to me, we (be) _____ home earlier.
I (write) _____ you a postcard if I (have) _____ your address.
If I (not / break) _____ my leg, I (take part) _____ in the contest.
If it (not/ start) _____ to rain, we (walk) _____ to the museum.
We (swim) _____ in the sea if there (not / be) _____ so many sharks there.
If she (take) _____ the bus, she (not / arrive) _____ on time.

Rev ision of conditional sentences

Conditional Sentences Type I

Complete the Conditional Sentences Type I.

If you (go) _____ out with your friends tonight, I (watch) _____ the football match on TV.
I (earn) _____ a lot of money if I (get) _____ that job.
If she (hurry / not) _____, we (miss) _____ the bus.

Conditional Sentences Type II

Complete the Conditional Sentences Type II.

If he (try) _____ harder, he (reach) _____ his goals.
I (buy) _____ these shoes if they (fit) _____.
It (surprise / not) _____ me if he (know / not) _____ the answer.

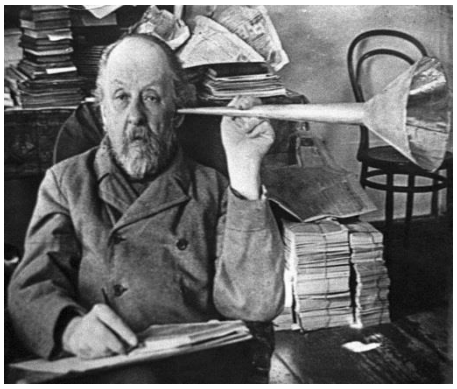
Conditional Sentences Type III

Complete the Conditional Sentences Type III.

If we (listen) _____ to the radio, we (hear) _____ the news.
If you (switch) _____ on the lights, you (fall / not) _____ over the chair.

She (come) _____ to our party if she (be / not) _____ on holiday.

Konstantin Eduardovich Tsiolkovsky



Konstantin Eduardovich Tsiolkovsky (1857-1935), the man of "great efforts and little rewards,"....considered to be the "father" of achievements in rocket technology. He gave Russia a spaceship project which was, for 1903, absolutely unique. Tsiolkovsky wrote of spaceflight in science fiction, but went further. Self-taught in mathematics, astronomy, and physics, he proceeded to develop the basic theory of rocket propulsion, and in 1898 submitted his now famous article "The Investigation of Outer Space by Means of Reaction Apparatus," to the editors of Science Survey. The article, however, was not published until 1903. The report suggested the use of liquid propellants for rockets in order to achieve greater range. Tsiolkovsky stated that the speed and range of a rocket were limited by the exhaust velocity of escaping gases.
In 1926 Tsiolkovsky suggested the use of artificial earth satellites, including manned platforms, as way stations for interplanetary flight, and in 1929 he put forth an idea for a multistage rocket which he described as a rocket train.

Exercise 2 Read the statements and decide whether the statements are true,false or not given

Tsiolkovskiy offered a weapon which was unique for Russia.
False
True
Not given
He continued to develop the basic theory of rocket propultion.
True
False
Not given
In 1926 Tsiolkovskiy advised the use of artificial earth satellites.
Not given
True
False

Exercise 3 Fill the blanks with proper words

Tsiolkovskiy ‘s report recommended the use of ……..for rockets in order to achieve greater range.
Gas substances
Solid propellants
Liquid propellants
In 1929 he put forth an idea for a ……which he described as a rocket train.

Multistage rocket
Spark airline
Multistage car.
Tsiolkovskiy wrote of spaceflight in……..
Physiological reality
Science fiction
Mental imagination

Exercise 4.Match the words and their definitions

1.Rocket	a) character which is described as something can move in speed.
2.spaceflight	b) is a situation that spaceships can fly in the cosmos
3.velocity	c) aggregate condition of any substance which has longer distance between molecules than gas and solid one.
4.publish	d) to print
5.propulsion	e) a situation can involve something in raising
6.survey	f) check – up ,control
7.liquid	the structure which is flied to the cosmos with high energy
8.range	g) field

Listening task

1.Listen to the text and correct the mistakes in the sentences.

Installer bit is the most common type for home use. It is used in wood, plastic, and light metal projects.

Hole saw bits are designed for wood boring, while the latter is used for more chip removal, thus allowing for deeper boring.

Twist bit is a specialized twist bit which can drill through wood, plaster, and some masonry. They are designed for installing wiring, such as that for entertainment or security systems.

Brad-Point bit and Auger bit is used for drilling large holes to install door hardware or for creating a wiring pass-through.

Masonry bit are used for glass or tile. To reduce the chance of chips and cracks, this bit uses a carbide tip to drill.

Glass and tile bit drills into tough materials such as concrete, brick, and masonry.

Unit 5 Lesson 2 Igor Sikorsky

Grammar:Reported Speech

We use a 'reporting verb' like 'say' or 'tell'. If this verb is in the present tense, it's easy. We just put 'she says' and then the sentence:

Direct speech: I like ice cream.
Reported speech: She **says** (that) she **likes** ice cream.
We don't need to change the tense, though probably we do need to change the 'person' from 'I' to 'she', for example. We also may need to change words like 'my' and 'your'.
But, if the reporting verb is in the past tense, then usually we change the tenses in the reported speech:
Direct speech: I like ice cream.
Reported speech: She **said** (that) she **liked** ice cream.

Tense	Direct Speech	Reported Speech
present simple	I like ice cream	She said (that) she liked ice cream.
present continuous	I am living in London	She said (that) she was living in London.
past simple	I bought a car	She said (that) she had bought a car OR She said (that) she bought a car.
past continuous	I was walking along the street	She said (that) she had been walking along the street.
present perfect	I haven't seen Julie	She said (that) she hadn't seen Julie.
past perfect*	I had taken English lessons before	She said (that) she had taken English lessons before.
Will	I'll see you later	She said (that) she would see me later.
would*	I would help, but..”	She said (that) she would help but...

Can	I can speak perfect English	She said (that) she could speak perfect English.
could*	I could swim when I was four	She said (that) she could swim when she was four.
Shall	I shall come later	She said (that) she would come later.
should*	I should call my mother	She said (that) she should call her mother
might*	I might be late	She said (that) she might be late
Must	I must study at the weekend	She said (that) she must study at the weekend OR She said she had to study at the weekend

Igor Sikorsky

Igor Sikorsky is considered to be the "father" of helicopters not because he invented the first. He is called that because he invented the first successful helicopter, upon which further designs were based. One of aviation's greatest designers, Russian born Igor Sikorsky began work on helicopters as early as 1910. By 1940, Igor Sikorsky's successful VS-300 had become the model for all modern single-rotor helicopters. He also designed and built the first military helicopter, XR-4, which he delivered to Colonel Franklin Gregory of the U.S. Army. Igor Sikorsky's helicopters had the control to fly safely forwards and backwards, up and down, and sideways. In 1958, Igor Sikorsky's rotorcraft company made the world's first helicopter that had a boat hull and could land and takeoff from water. It could also float on the water.

Exercise 1 Read the statements and decide whether the statements are true,false or not given

Igor Sikorskiy created a famous airplane which can fly through airline
True
False
Not given
Igor offered a helicopter for American army
False
Not given
True
At first, Igor tested his helicopter in America
True

False
Not given

Exercise 2Correct the spe lling

Rowarfds----------
Sigdener----------
Tarymiil----------
Therurf----------
Ytefsa----------
Ropetr----------

Exercise 3 Define synonym pairs

Float	**Regard**
Consider	**Sail**
Base	**Rule**
Control	**To be founded**
Deliver	**Narrate**

Listening task

1.Listen to the text and answer the questions.

1.For what is a screwdriver used?

2.What is the traditional and the most commonly used screwdriver?

3.What is the slot size of this screwdriver?

4.What is the width of its blade?

5.What for is Philips screwdriver used?

6.In what country Pozidriv screwdriver used mainly?

2.Listen to the text again and decide which sentence is True,False or Not Given.

1.Screwdrivers are differentiated based on the tip and type of screw they drive.

T/F/NG

2.The flat head screwdriver is also called slotted screwdriver. **T/F/NG**

3. Philips Screwdriver is used for all applications like woodwork, furniture, electronic equipment and repairing the cars, fixing nails. **T/F/NG**

4. Torx screwdrivers are used with automotive and electronic items. **T/F/NG**

5. A corner screwdriver is used for fixing box corners. **T/F/NG**

UNIT 5 **Lesson** 3 Theodore H. Maiman

Grammar:Questions in Reported Speech

Examples

Direct speech	**Indirect speech**
"Where does Peter live?"	She asked him where Peter lived.
"Where are you going?"	She asked where I was going.
"Why is she crying?"	He asked why she was crying.

Exercise 1.Rewrite the sentences in indirect speech.

 1."Where are you?" - He asked me _____.

2."What will you choose?" - He asked me _____.

3."Please, get in touch with them today." - He asked me _____.

4."Don't leave your luggage unattended." - He asked me _____.

5."Are you flying soon?" - He asked me _____.

6."May I ask you a question?" - He asked me _____.

7."Jump in!" - He asked me _____.

8."Have you set your alarm clock?" - He asked me _____.

9."Is Prague the capital?" - He asked me _____.

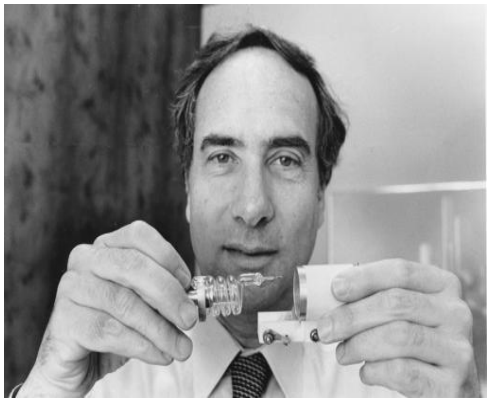
10."You mustn't touch the screen!" - He asked me _____.

11."Would you rather dance?" - He asked me _____.

12."How long have you been standing here?" - He asked me _____.

.

Theodore H. Maiman



In 1960, American physicist **Theodore H. Maiman** demonstrated the first laser. A laser is a device that produces a thin, intense beam of light. The laser has become one of the most useful inventions of the 1900's. Lasers are great value in areas such as communications, industry, medicine, and scientific research.

In communications, the laser is used with another

recent invention, the optical fiber, a hair-thin strand of glass or plastic. In a fiber-optic communication system, special lasers transmit messages that are encoded as pulses of light through optical fibers. In 1970, Corning Glass Works produced the first optical fiber that was suitable for long-range communication. Today, a fiber-optic communication system can transmit more information than can a traditional system that sends information encoded as electrical pulses through copper wires in large cables .

Exercise 2 Read the text and answer the following questions

1.What did Theodore H.Maiman invent ?
2.Which fields are lasers great value in?
3.What are the advantages of a fiber-optic communication system ?
4.What is the laser ?
5.When was the first optical fiber produced ?
Give examples of applying laser in medicine.

Exercise 3 Match the words and their definitions

demonstrate	Source of light which is produced by the sun
Beam of light	It consists of metal wire and plastic cover , it is useful for communication
communication	A mixture which consists of several components , its main component is polymer
plastic	A field which related with media such as connection,internet,
Cable	showing something which is new for science or other fields

Exercise 4 Fill the gaps with correct words from the box

great value beam of light the first laser long-range communication electrical pulses

The first optical fiber was suitable for……
Laser is ……in areas such as communication, industry ,medicine
Laser is a devise that produce intense,thin…….
In 1960 , American physicist Theodore H. Maiman demonstrated ……
Traditional system sends information encoded as ……through copper wires in large cables.

1.Listen again to the text and circle the right answer.

1.To avoid surface damage and nail slippage, make sure the _____ of the hammer is smooth.

a) hand b)nose c)head d)foot

2.A claw hammer is the most common hammer used for heavy work is also called _____hammer.

a)Engineer's b)Carpenter's c) Builder's d)Locksmith's

3.Ball peen or engineers' hammers are used for shaping metal.

a)Toy b)Nut c)Ball c)Lamp

2.Listen to the text again and fill in the gaps.

1.____ _____ _____ is used for furniture making, to start off the tack or nail.
_____ _____ or _____ hammers are used for shaping metal, closing rivets and
2.rounding edges off metal pins and fasteners.
3._____ or ____ hammer is used to hit things like cold chisels to break masonry.
_____ hammer is used for breaking up masonry, stones and concrete and also for
4.driving in stakes.
5._____ Hammer is the variation to the sledge hammer, which is designed to deliver maximum power on impact and minimize damage to the surface.
6._____ comes with a wooden block on a handle, which is used to hit and drive a chisel, tap wooden joins together.

UNIT 6 **Lesson 1** Muhammad ibn Musa al-Khwarizmi

Grammar:Yes / no questions in indirrect speech

This type of question is reported by using **'ask' + 'if / whether' + clause**:
Examples

Direct speech	**Indirect speech**
"Do you speak English?"	He asked me if I spoke English.
"Are you British or American?"	He asked me whether I was British or American.
"Is it raining?"	She asked if it was raining.
"Have you got a computer?"	He wanted to know whether I had a computer.
"Can you type?"	She asked if I could type.
"Did you come by train?"	He enquired whether I had come by train.
"Have you been to Bristol before?"	She asked if I had been to Bristol before.

Exercise 1.Rewrite the sentences in indirect speech.

Christopher: "Do you want to dance?"
Christopher asked me _____.
Betty: "When did you come?"
Betty wanted to know _____.
Mark: "Has John arrived?"
Mark asked me _____.
Ronald: "Where does Maria park her car?"
Ronald asked me _____.
Elisabeth: "Did you watch the latest film?"
Elisabeth asked me _____.
Mandy: "Can I help you?"
Mandy wanted to know _____.
Andrew: "Will Mandy have lunch with Sue?"
Andrew asked me _____.
Justin: "What are you doing?"
Justin asked me _____.

Frank: "How much pocket money does Lisa get?"
Frank wanted to know _____.
Anne: "Must I do the shopping?"
Anne asked _____.

Exercise 2.Read the text and discuss in groups:
a)the scientist's life;
b)the scientist's contribution to the science.

Muhammad ibn Musa al-Khwarizmi

Muhammad ibn Musa al-Khwarizmi was a Persian mathematician, astronomer, astrologer geographer and a scholar in the House of Wisdom in Baghdad. He was born in Persia of that time around 780. Al-Khwarizmi was one of the learned men who worked in the House of Wisdom. Al-Khwarizmi flourished while working as a member of the House of Wisdom in Baghdad under the leadership of Kalif al-Mamun, the son of the Khalif Harun al-Rashid, who was made famous in the Arabian Nights. The House of Wisdom was a scientific research and teaching center.

Contributions and Achievements:

Al-Khwarizmi developed the concept of the algorithm in mathematics (which is a reason for his being called the grandfather of computer science by some people). Al-Khwarizmi's algebra is regarded as the foundation and cornerstone of the sciences. To al-Khwarizmi we owe the word "algebra," from the title of his greatest mathematical work, Hisab al-Jabr wa-al-Muqabala. The book, which was twice translated into Latin, by both Gerard of Cremona and Robert of Chester in the 12th century, works out several hundred simple quadratic equations by analysis as well as by geometrical example. He also wrote an important work on astronomy, covering calendars, calculating true positions of the sun, moon and planets, tables of sines and tangents, spherical astronomy, astrological tables, parallax and eclipse calculations, and visibility of the moon.

Of great importance also was al-Khwarizmi's contribution to medieval geography. Al-Khwarizmi made several important improvements to the theory and construction of sundials, which he inherited from his Indian and Hellenistic predecessors. His sundial was universal and could be observed from anywhere on the Earth.

Muhammad ibn Musa al-Khwarizmi died in c. 850 being remembered as one of the most seminal scientific minds of early Islamic culture.

Exercise 3. Paraphrase John's questions

►John Brian is a tourist and a scientist.He is talking with his guide about ancient scientists of the East,especially in al-Khwarizmi's contribution to the science.Here are some questions he asked the quide.

John Brian	**The guide**
What was al-Khwarizmi?	***He asked me what was al-Khwarizmi?***
Was he a member of the House of Wisdom in Baghdad?	
What other work did he write in astronomy?	
Did he do any improvements in sundials?	
Is Al-Khwarizmi's algebra regarded as the foundation and cornerstone of the sciences?	
Which book of al-Khwarizmi was twice translated into Latin?	

Exercise 4. Match the words with definitions

1	astrologer	a)is a device used for telling the time when the sun is shining
2	geographer	b)a person who is trained in the study of numbers and calculations
3	Scholar	c)a person who uses astrology to try to tell you things about your character and your future
4	mathematician	d)a person who studies geography or is an expert in it
5	Astronomer	e)a person who is highly educated or has an aptitude for study
6	Sundials	f)a scientist who studies the stars, planets, and other natural objects in space

Listening task

1.Listen to the text and answer the questions.

1.What do the Muslim kings do besides political preoccupations?

2.What was Akbar's special interest?

3.What was Jahangir's book about?

4. What was Jahangir interested in besides animals?

2.Listen to the text again and circle the right answer

1. The Muslim kings, who were warriors and hunters, maintained a_____ of animals

a) fleet b) float c) feet d) foot

2. Akbar had a special interest in producing good _____ of domestic animals like elephants and horses.

a) bread b) breeds c) beard d) bears

3. As a naturalist, Jahangir was also interested in the study of _____.

a) plans b) paints c)plants d)points

UNIT 6 Lesson 2 Abu Raykhan Beruni

Grammar:Imperative sentences in indirect Speech

Convert the sentences below from direct to indirect speech (reported speech).

1. Mother to daughter: "Put on your shoes."

Her mother told her to put on her shoes.

2. The teacher to me: "Open your notebook."

.

3. Merry to her uncle: "Don't be mad at me."

.

4. Coach to Jack: "Get on your feet!"

.

5. The cashier to Angela: "Give me your receipt."

.

6. Adan to his mother: "Help me with my homework."

.

7. The officer to us: "Do not park here."
[ ].
8. The ambulance driver to pedestrians: "Move out of the way!"
[ ].
9. Daniel to his mother: "Wait for me."
[ ].
10. Pam to her husband: "Stop acting like a child."
[ ].

Mixed Exercise 1 Complete the sentences in reported speech. Note whether the sentence is a request, a statement or a question.

He said, "I like this song."
→ He said [ ]
"Where is your sister?" she asked me.
→ She asked me [ ]
"I don't speak Italian," she said.
→ She said [ ]
"Say hello to Jim," they said.
→ They asked me [ ]
"The film began at seven o'clock," he said.
→ He said [ ]
"Don't play on the grass, boys," she said.
→ She told the boys [ ]
"Where have you spent your money?" she asked him.
→ She asked him [ ]
"I never make mistakes," he said.
→ He said [ ]
"Does she know Robert?" he wanted to know.
→ He wanted to know [ ]
"Don't try this at home," the stuntman told the audience.
→ The stuntman advised the audience [ ]

Exercise 2. Read the text and discuss the folowing questions:

a)Where and when was Al-Biruni born?
b)Who taught Al-Biruni ?
c) What subjects did he make contribution to?
d)Tell the names of his other books.
e)In what countries were monuments to Eastern scholars set up?

Abu Rayhan al-Biruni

Al-Biruni was born in the year 973, in the Khwarezm region of Khorasan, which is in present day Uzbekistan. Otherwise, much is not known about his childhood and family.

The region was ruled by the Khwarezm-Shah Dynasty at that time and one of its princes named Abu Nasr Mansur ibn Iraq, taught Abu Rayhan al-Biruni.

Abu Rayhan al-Biruni was one of the finest scholars the world has ever produced. He has made immense contribution to the world of science, geography, astronomy, physics and many other fields. His works, along with those of other great scientists, have established the grounds of modern science. Even though he lived in the medieval times, his speculations and observations hold good till date. He formulated many mathematical solutions to unsolved problems and even determined the latitudes and longitudes of many regions through his keen observation. He devised a few instruments to help determine certain values such as the radius of earth and the specific gravity of metals. He also had vast knowledge about the culture, customs, literature and religions of different places around the world, since he travelled to various regions along with his patrons. This helped him to write volumes about the places he visited, especially India. These books can be regarded as encyclopaedias about the places, and these are a manifestation of his observant quality, as these books contain minute descriptions of the topics he has dealt with.

Al-Biruni penned his work named ‘Kitab Al-Tafhim li-awa il sina at al-tanjim’ (Elements of Astrology) is till date the most wide-ranging dealing of the subject. Biruni thought astrology to be a significant instrument for imparting mathematical and astronomical knowledge and his more than half of his book comprised of teaching astronomy, mathematics, geography and chronology.

His other works include ‘Al-jamahir fi ma rifat al-jawahir’ (Gems), ‘Ifrad al-maqal fi amr al-zilal’ (The Exhaustive Treatise on Shadows), ‘Kitab al-saydanah’ (Pharmacology) and ‘Maqalid ilm al-hay ah’ (Keys to Astronomy). These works are less in volume but do not lack content. They encompass particular subjects each of which have been discussed in detail.

Exercise 3. Read the text again and decide whether the sentences True / False/Not Given

1. Much is known about his childhood and family._____
2. He has made immense contribution to the world of science, geology, astronomy, physics and austnautics and in many other fields._____
3. Not only his works established the grounds of modern science._____
4. He invented many instruments that helped geographers._____
5. 1000 - he had written a book called Chronology/Researches of India_____
6. 1019- observed and described lunar and solar eclipse._____

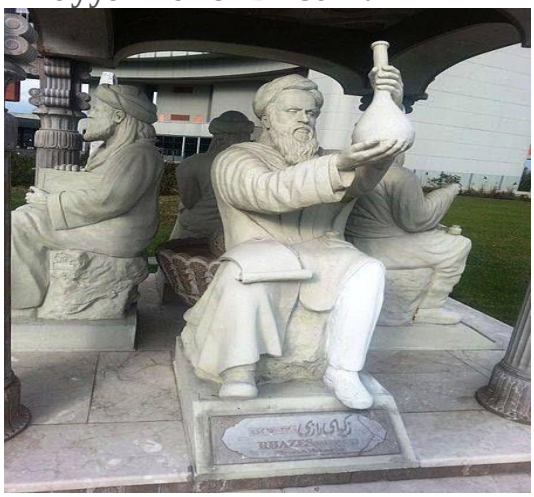
7.1031- completed his extensive astronomical encyclopaedia Kitab al-Qanun al-Mas'udi._____

8.Most of his books are devoted to astronomy, mathematics, geography and chronology._____

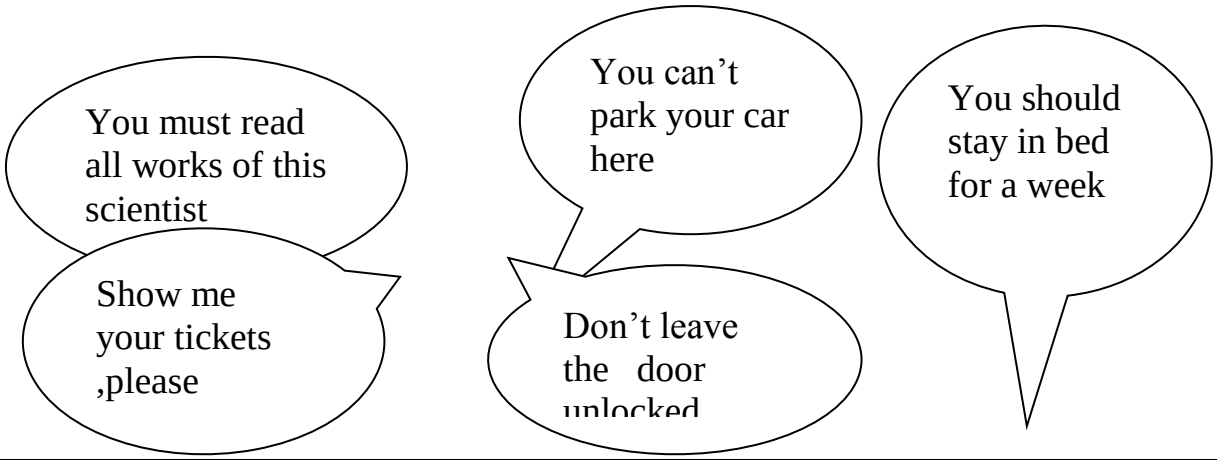
9. The scientists travelled a lot and wrote volumes about places he had visited.

_____

Exercise 4.Describe the picture and speak about scholars contribution. The Scholars Pavilion raised in front of the United Nations building in Vienna, Austria, depicting the statues of four of our great Scholars: Avicenna, Rhazes, Khayyam and Birouni.



Exercise 4.Complete the sentences.Report what was said.(tell,ask,remind,advice)



Unit 6 Lesson 3 ABU ALI ibn SINA

Grammar: Passive voice

Vocabulary

Exercise 1.Match the words with their definitions

1	advocate	A	to become sound or healthy again
2	jurisprudence	B	giving off light; bright or shining by itself
3	logic	C	the condition of being known or talked about

			by many people; fame
4	baffle	D	a person qualified to practice medicine
5	physician	E	totally bewilder or perplex
6	renown	F	the branch of philosophy concerned with analysing the patterns of reasoning by which a conclusion is properly drawn from a set of premises, without reference to meaning or context
7	heal	G	is the study of law and the principles on which laws are based.
8	self-luminous	h	a person who publicly supports or recommends a particular cause or policy

Exercise 2. Read the text again and comment the following fugures.
10, 980, 14, 16, 18, 5, 12 century, XIIth, VIIth, 400, 240,1037.
Exercise 3.Read the text and write out the facts about amaizing abilities of the scientist.

►*E.g. By the age of ten he became a Quran Hafiz*

1._____
2._____
3._____
4._____
5._____

Exercise 4.What do the underlined words refer to?

1.This book was intended to 'heal' the soul.
2.He would pray to God to guide him.
3.It comprised of medical knowledge available from ancient and Muslim sources.
4.This book was translated into Latin in the twelfth century
5. This book was an immense five volume encyclopedia of medicine

Grammar: Passive voice

When the subject is not the agent(is not doing the action) we use a passive verb.
A passive verb is a form of ***be*** + a passive participle
Students carry out experiments in this lab.(Active Voice because the subject is a person doing an action)
Experiments ***are carried*** out by students (Passive voice –the subject is experiment is not the agent.It is the thing that the action is directed at.
Passive voice can be changed according to the tense of the verb.
Experiments was ***carried*** out by students (Past Simple Passive)
Experiments will be ***carried*** out by students(Future Simple Passive)
Experiments ***are being carried*** out by students (Present Progressive Passive)
Experiments **were *being carried*** out by students (Past Progressive Passive)
Experiments **has been *carried*** out by students (Present Perfect Passive)
Experiments **had been *carried*** out by students (Past Perfect Passive)
Experiments **will have been *carried*** out by students (Future Perfect Passive)

Exercise 5.Change the sentences into Passive voice.

1. . Ibn Sina received his early education in his home town.
2. he found the solutions to his difficulties.
3. he dedicated all his efforts to learn medicine.
4.He cured Nuh II, Ruler of the Samanids.
5. He invented an instrument for observing the coordinates of a star.
6. He made several astronomical observations.
7.Avicenna wrote over 400 works.

Exercise 6.Change the sentences into Active Voice.

1.Ibn Sina was highly baffled by the work of Aristotle
2.This book was translated into Latin in the twelfth century by the scholars.
3.The Canon of Medicine was used as the standard medical text in European universities by medieval scientists.

Exercise 7.Which of the sentences follows on best?

1.There's going to be a big conference.
a)□ a lot of scientists will be attracted to it b) □ it will attract a lot of scientists
2.The deadline of application is May 20.
a)□ It will be closed on May 21. B) □They will close it on May 21.
3.The tests were given to the principal
a) □they are being checked b) □ they check the tests
4.Our researchers completed the experiment.
a) □The newspapers will publish the results b) □ the results will be published
5.A lot of quests are coming to our city tomorrow
a) □they will be met by us b)□we will meet them
6.Nancy received her mail at last.
a)□it has been delivered by the postman b)□The postman delivered it
7.Martin saw his mother working in the kitchen.
a)□ kitchen was being cleaned b)□mother was cleaning the kitchen
8.My friend is ill.
a)□He is being looked after in the hospital b)□The local hospital is looking after him

Speaking
Discuss in group what is common about the medieval scientists you learned about.

ABU ALI ibn SINA

This great scientist was born in around 980 A.D in the village of Afshana, near Bukhara, now in Uzbekistan, which is also his mother's hometown. His father, Abdullah an advocate of the Ismaili sect, was from Balkh which is now a part of Afghanistan. Ibn Sina received his early education in his home town and by the age of ten he became a Quran Hafiz (he had memorized the Quran). He had exceptional intellectual skills which enabled him to overtake his teachers at the age of fourteen. During the next few years he devoted himself to Muslim jurisprudence, philosophy and natural science and studied logic, Euclid, and Ptolemy's Almagest. Ibn Sina was an extremely religious man. When he was still young, Ibn Sina was highly baffled by the work of Aristotle on metaphysics so much so that he would pray to God to guide him. Finally after reading a manual by a famous philosopher al-Farabi, he found the solutions to his difficulties.

Contributions and Achievements

At the age of sixteen he dedicated all his efforts to learn medicine and by the time he was eighteen gained the status of a reputed physician. During this time he cured Nuh II, Ruler of the Samanids, of an illness in which all the renowned physicians had given up hope. On this great effort, the Amir wished to reward him, and the young physician requested consent to use his exclusively stocked royal library.

Works

Avicenna's most important contribution to medical science was his famous book Al Qanun Fi Al-Tibb (The Canon of Medicine), known as the "Canon" in the West. This book was an immense five volume encyclopedia of medicine including over a million words. It comprised of medical knowledge available from ancient and Muslim sources. This book was translated into Latin in the twelfth century and was used as the standard medical text in European universities until the mid-seventeenth century.

His other major work was "The Book of Healing", a scientific and philosophical encyclopedia. This book was intended to 'heal' the soul. It was split into four parts: logic, natural sciences, mathematics and metaphysics. In his book, he developed his own system of logic, Avicennian logic. In astronomy, he proposed that Venus was closer to the Sun than the Earth. He invented an instrument for observing the coordinates of a star. He made several astronomical observations and stated that the stars were self-luminous. In mathematics, Avicenna explained the arithmetical

concept and application of the “casting out of nines”. Ibn Sina also contributed to poetry, religion and music. In total, Avicenna wrote over 400 works, of which around 240 have survived.

Unit 7 Lesson 1 ENGINEERING

GRAMMAR: Pronoun one/ones

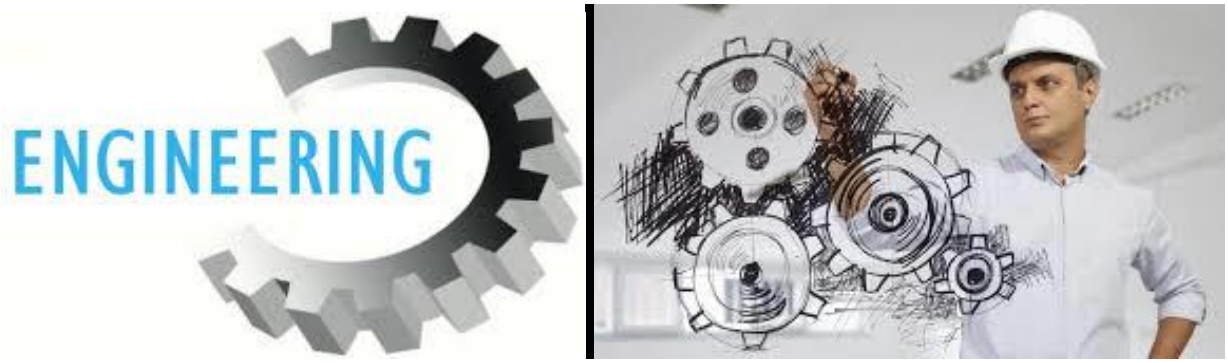
Task 1. Match the **words with their definitions**

	engineering		a structure carrying a road, path, railway, etc. across a river, road, or other obstacle
	military		a barrier constructed to hold back water and raise its level, forming a reservoir used to generate electricity or as a water supply
	temple		a defensive wall or other reinforcement built to strengthen a place against attack
	palace		is the planning, design, and building of roads, bridges, harbours, and public buildings.
	thermodynamics		a large, splendid house or place of entertainment
	civil engineering		is the branch of physics that is concerned with the relationship between heat and other forms of energy.
	fortifications		a building devoted to the worship of a god or gods
	dam		relating to or characteristic of soldiers or armed forces
	bridge		the branch of science and technology concerned with the design, building, and use of engines, machines, and structures

Task 2. Discuss the following questions in groups.
1.What is the difference between 'engineer' and "engineering"?
2.Can we say that engineering is an art?Why/Why not?
3.What are the branches of engineering?
4.What do the structures of different countries reflect?
Compare the pictures of structures in Central Asia and Italy as an example.
5.What subjects must you study in order to become an engineer?
Task 3. Dicide which sentence is TRUE/FALSE/NOT GIVEN
1.Many thousand years ago people knew how to build houses, palaces, temples, pyramids and other structures **._____**
2. At the time of the Roman Empire there were already four branches of engineering._____
3.The art of civil engineering was enriched with a lot of achievements of science._____
4.Students study physics,mathematics,chemistry and other subjects to become engineers._____
5."Mechanical engineers" and "civil engineers" are the same._____

Grammar One/Ones

We use one and ones to avoid repeating a noun.We use one fora singular noun and ones for a plural noun.
E.g.I need a black pencil.This <u>one</u> is not writing.
I didn't like these trainers.Show me brown <u>ones</u>
One can be used instead of a person.
One(man) should be careful when crossing the street.
Exercise 5. Guess which word can best substitute pronouns one/ones.
1.The most widely used <u>ones</u> are: engineering, architecture, machine building, technics.
2. The term 'engineering' is a modern one.
3. It is still possible to find the remains of Roman structures not only in Italy but also in some other countries, <u>the ones</u> that were occupied by the Roman legions.
4.Among those countries <u>one</u> may mention the territory of modern England which remained under Roman rule for about four centuries.
5. It was that trend that laid the foundation for a new branch of engineering, the <u>one</u> that was called mechanical engineering.



ENGINEERING

Engineering is a science which deals with design, construction and operation of structures, machines, engines and other devices used in industry and every day life. That there is no single meaning of this word makes it sometimes difficult to find the proper Russian equivalents at once. The most widely used ones are: engineering, architecture, machine building, technics.

The term 'engineering' is a modern one. However the art of building houses, palaces, temples, pyramids and other structures was known as far back as many thousand years ago. Now we call it 'civil engineering' It may be of interest for the students to learn that at the time of the Roman Empire there were already two branches of engineering: civil engineering and military engineering. The former included the building of houses, roads, bridges, etc., the latter the building of fortifications and military devices. It is still possible to find the remains of Roman structures not only in Italy but also in some other countries, the ones that were occupied by the Roman legions. Among those countries one may mention the territory of modern England which remained under Roman rule for about four centuries.

As time went on the art of civil engineering was enriched with few achievements of science.

It grew into a profession that required college training. Nowadays , civil engineering may be spoken of as an important branch of national economy. It deals not only with the building of houses, bridges, roads, tunnels, dams, water systems, etc., but also

with the construction of railroads, underground railways, industrial structures, land, water and air transport, etc.

It is well known that with the invention of the steam engine and the growth of factories a number of civil engineers became interested in the practical application of the science of mechanics and thermodynamics to the design of machines. The result was that they separated themselves from civil engineering and called themselves "mechanical engineers" It was that trend that laid the foundation for a new branch of engineering, the one that was called mechanical engineering.

Task 1. Match the **words with their definitions**

	engineering		a structure carrying a road, path, railway, etc. across a river, road, or other obstacle
	military		a barrier constructed to hold back water and raise its level, forming a reservoir used to generate electricity or as a water supply
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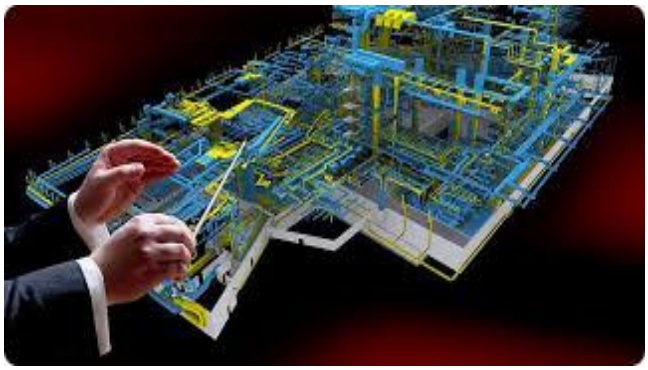
Unit 7 Lesson 2 Modern Engineering



Modern Engineering

At present mechanical engineering occupies a prominent position among modern production processes. It is mechanical engineering that deals with the design and construction of steam engines, turbines, air –conditioning and refrigeration devices. Conveyors, escalators and elevators are also designed by mechanical engineers. And again, it is the mechanical engineer that designs machine-tools for various operations and it is he who applies these machine-tools in various production processes.

One must know that aeronautics is also one of the branches of mechanical engineering, the one that deals with the mechanics of moving bodies in fluid or air. Turning back to history, it is well to recollect that in the 19th century, with the development of the science of electricity, there appeared another branch of engineering-electrical engineering.

Now the latter is divided into two main branches: communications engineering and power engineering. The former deals with minute quantities of electricity which are used for all kinds of communications, the latter-with the means for producing power. Thus, the electrical engineer is the one that designs radio, television and telephone equipment. The power engineer designs generators, switches, transformers, etc.

In the middle of the 20th century there appeared other new branches of engineering. The former is based on atomic physics, the latter on all the achievements of modern science and engineering.

It is impossible, however, to speak of present day engineering without mentioning chemical engineering. This deals with the processes and equipment which make it possible to change the state, energy content, chemical or physical composition of various materials.

At present there are hundreds of subdivisions of engineering, but they all, at one time or another, branched off from civil, mechanical ,electrical or chemical engineering.

Task 1. .Give verbs corresponding to the following nouns.

Construction	***To construct***
communication	
application	
invention	
production	
fortification	
composition	
foundation	
refrigeration	

Task 2.Group the words.

subject	**devices**	**profession**	**others**

1.steam engines
2.air –conditioning
3.conveyors
4.elevators
5.production processes
6.branches
7.mechanics
8.fluid
9.power engineering
10.switches
11.chemical engineering
13. turbines
14.refrigeration devices
15. escalators
16. machine-tools
17. aeronautics
18. mechanical engineering
19. moving bodies
20. electrical engineering.
21.communications engineering
22. quantity
23. transformers

Task 3. Match professions and occupations

1	mechanical engineering	a	Deals with the means for producing

			power.
2	communications engineering	b	deals with the design and construction of steam engines, turbines, air –conditioning and refrigeration devices
3	power engineering	c	designs radio, television and telephone equipment
4	chemical engineering	d	deals with the building of houses, bridges, roads, tunnels, dams, water systems, the construction of railroads, underground railways, industrial structures, land, water and air transport.
5	civil engineering	e	deals with changing of the state, energy content, chemical or physical composition of various materials.

Exercise 4.Correct the mistakes in the sentences.

1. Mechanical engineering is dealing with the design and construction of steam engines, turbines, air –conditioning and refrigeration devices.

2.Mechanical engineers also designs conveyors, escalators and elevators .

3.Aeronautics are also one of the branches of mechanical engineering.

4. Electrical engineering is appeared as another branch of engineering-.

5.The electrical engineer is the one that designs radio, television and telephone equipment.

UNIT 1

Lesson 1.

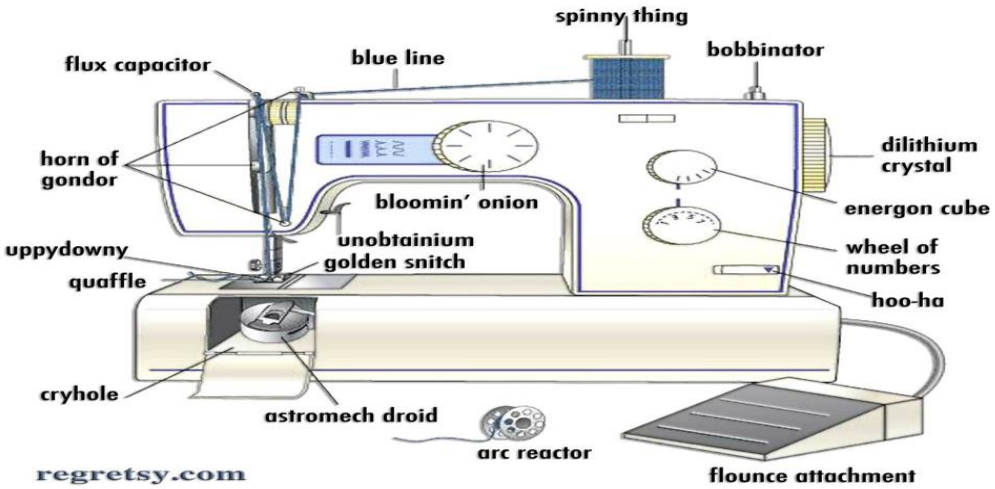
HISTORY OF SEWING MACHINES

Exercise 1.Write Uzbek(Russian) equivalents of these words and make up your own sentences.

Inventor	sewing machine
design,	successfully
advertise	machine
leather	a vertical needle

Exercise 2. Pre-reading questions:

1.What do you know about sewing machines?
2. Do you know anything about the history of sewing machines?



Exercise 3 Read and translate the text.

A **sewing machine** is a machine used to stitch fabric and other materials together withthread. Sewing machines were invented during the first Industrial Revolution to decrease the amount of manual sewing work performed in clothing companies. Since

the invention of the first working sewing machine, generally considered to have been the work of Englishman Thomas Saint circa 1790, the sewing machine has greatly improved the efficiency and productivity of the clothing industry.

Home sewing machines are designed for one person to sew individual items while using a single stitch type. In a modern sewing machine the fabric easily glides in and out of the machine without the inconvenience of needles and thimbles and other such tools used in hand sewing, automating the process of stitching and saving time.

Industrial sewing machines, by contrast to domestic machines, are larger, faster, and more varied in their size, cost, appearance, and task.

Charles Fredrick Wiesenthal, a German-born engineer working in England was awarded the first British patent for a mechanical device to aid the art of sewing, in 1755. His invention consisted of a double pointed needle with an eye at one end.

In 1790, the English inventor **Thomas Saint** invented the first sewing machine design, but he did not successfully advertise or market his invention. His machine was meant to be used on leather and canvas material. It is likely that Saint had a working model but there is no evidence of one; he was a skilled cabinet maker and his device included many practically functional features: an overhanging arm, a feed mechanism (adequate for short lengths of leather), a vertical needle bar, and a looper.

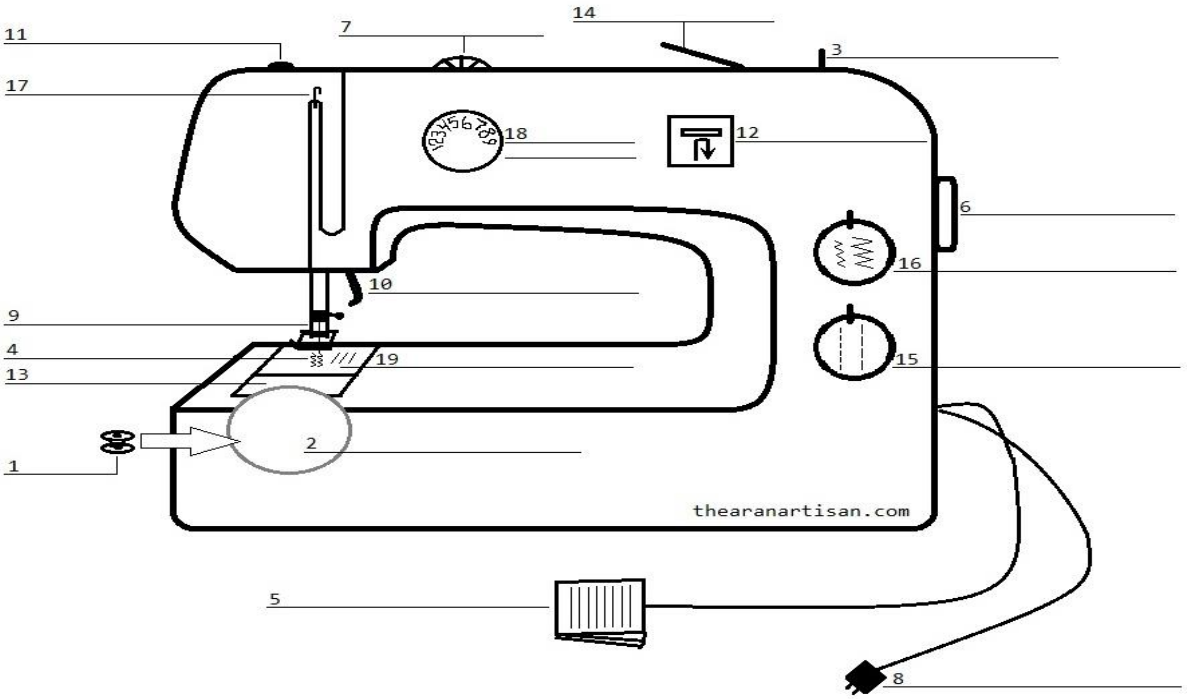
His sewing machine used the chain stitch method, in which the machine uses a single thread to make simple stitches in the fabric. A stitching awl would pierce the material and a forked point rod would carry the thread through the hole where it would be hooked underneath and moved to the next stitching place, where the cycle would be repeated, locking the stitch. Saint's machine was designed to aid the manufacture of various leather goods, including saddles and bridles, but it was also capable of working with canvas, and was used for sewing ship sails. Although his machine was very advanced for the era, the concept would need steady improvement over the coming decades before it could become a practical proposition.. It is not known if Saint actually built a working prototype of his invention. The patent describes an awl that punched a hole in leather and passed a needle through the hole. A later reproduction of Saint's invention based on his patent drawings did not work.

In 1804, a sewing machine was built by the Englishmen Thomas Stone and James Henderson, and a machine for embroidering was constructed by John Duncan in Scotland. An Austrian tailor, Josef Madersperger, began developing his first sewing machine in 1807. He presented his first working machine in 1814.In 1810, German, Balthasar Krems invented an automatic machine for sewing caps. Krems did not patent his invention and it never functioned well.Austrian tailor, Josef Madersperger made several attempts at inventing a machine for sewing and was issued a patent in 1814. All of his attempts were considered unsuccessful.In 1804, a French patent was granted to Thomas Stone and James Henderson for "a machine that emulated hand sewing." That same year a patent was granted to Scott John Duncan for an "embroidery machine with multiple needles." Both inventions failed and were soon forgotten by the public.

POST-TEXT EXERCISES.

Exercise 4. Listen and complete these machine uses with word

a)wheel of number b) bobbinator c) cryhole. d)horn of gondor e)bloomin onion f) dilithium crystal g) energon cube h) hoo-ho i)uppydowny quaffle j)arc reactor



Exercise 5. . Complete these sentences with words from captions.

First practical manufacturing company
the world to create army uniforms
reportedly by workers fearful
a barbed needle which
interlocking the thread
pressing surfaces
widely used sewing machine
sewed straight seams
amining engineer,
the requisite drawings

submitted a patent application.

Exercise 6. Complete the sentences.

1. A **sewing machine** is a machine used to ....2.Sewing machines were invented ..... 3..... efficiency and productivity of the clothing industry.4.Home sewing machines .....5.....faster, and more varied in their size, cost, appearance, and task.6. ..... but he did not successfully advertise or market his invention.7. His sewing machine used the chain stitch method, …..8. Saint's machine was designed to aid the manufacture of various leather goods,…….9.In 1804, a sewing machine was built by the……,10 The patent describes an awl that punched a hole in …..

Exercise **7.** **TESTS**

1.What is the sewing machine?
a) A stitching awl would pierce the material
b) A **sewing machine** is a machine used to stitch fabric and other materials together withthread
c) Industrial sewing machines
d) Asewing machine used the chain stitch method

2. Thomas Saint, an Englishman, patented the first sewing machines… .
a) in 1755
b) in 1800
c) in1790.
d) in 1870

3) Home sewing machines .....for one person to sew individual items

a)designed
b) will be designed
c) is designed
d) are designed

4) An Austrian tailor, Josef Madersperger,…

a) began developing his first sewing machine in 1807

b) was designed to aid the manufacture
c) was very advanced for the era
d) invented the first sewing machine design,

5) In 1810, …..invented an automatic machine for sewing caps

a)John Adams Doge and John Knowle
b) John Duncan

c) Balthasar Krems
d) Thomas Stone

✍Exercise 8. Make up sentences in Present Indefinite Passive with the following verbs. Pay attention to the forms of Participle II.

Invent, lead, mean, become, make, hook, move, repeat, design, replace, determine, use, advance, describe, know.

✍Exercise 9 Write a short presentation summarizing your discussion. Then ask one person from your group to give a summary of the group's ideas to the rest of the class.

Listening task 1 Sewing machines

1.Listen to the text again and put the words in right order to make sentence.

1. introduction of This sizes demand led to the standardized

2. Howe and further perfected by Isaac Singer Use of the patented in 1846 by sewing machine, Elias

3. Sewing machines, and later in the century by electricity powered at first by foot treadles

1.Listen to the text and unjumble the words

1	roducinttion	
2	anddem	
3	inasedcre	
4	ductionpro	
5	wiseng	
6	chinesma	
7	incedreas	
8	ntedpate	

UNIT 1 Lesson 2HISTORY OF SEWING MACHINES

Exercise 1. Write Uzbek(Russian) equivalents of these words and make up your own sentences.

practical
chain stitch
A model of the machine
patent
the legal disputations
widely used
patent application.
the loop
to combine
stopped frequently

Exercise 2. Read and translate the text.

The first practical and widely used sewing machine was invented by Barthélemy Thimonnier, a French tailor, in 1829. His machine sewed straight seams using chain stitch like Saint's model, and in 1830 he signed a contract with Auguste Ferrand,

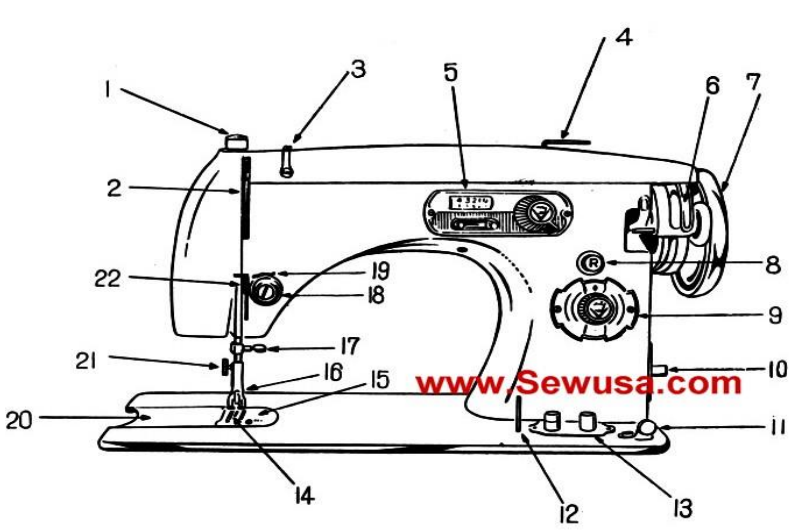
amining engineer, who made the requisite drawings and submitted a patent application. The patent for his machine was issued on 17 July 1830 and in the same year, he opened (with partners) the first machine-based clothing manufacturing company in the world to create army uniforms for the French Army. However, the factory was burned down, reportedly by workers fearful of losing their livelihood following the issuing of the patent

A model of the machine is exhibited at the London Science Museum. The machine is made of wood and uses a barbed needle which passes downward through the cloth to grab the thread and pull it up to form a loop to be locked by the next loop.The first American lockstitch sewing machine was invented by Walter Hunt in 1832. His machine used an eye-pointed needle (with the eye and the point on the same end) carrying the upper thread and a falling shuttle carrying the lower thread. The curved needle moved through the fabric horizontally, leaving the loop as it withdrew. The shuttle passed through the loop, interlocking the thread. The feed let the machine down, requiring the machine to be stopped frequently and reset up. Hunt eventually lost interest in his machine and sold it without bothering to patent it. In 1842, John Greenough patented the first sewing machine in the United States.The British partners Newton and Archibold introduced the eye-pointed needle and the use of two pressing surfaces to keep the pieces of fabric in position, in 1841.

The first machine to combine all the disparate elements of the previous half-century of innovation into the modern sewing machine, was the device built by English inventor John Fisher in 1844 for the processing of lace materials. His machine was substantially similar to the devices built by Isaac Merritt Singer and Elias Howe in the following years. However, due to the botched filing of Fisher's patent at the Patent Office, he did not receive due recognition for the modern sewing machine in the legal disputations of priority between the two Americans.

POST-TEXT EXERCISES

☝**Exercise 3**Find the correct parts of the mashine



1. Patch-o-matic Darner
2. Take-up Lever
3. Arm Thread Guide
4. Spool Pin
5. Zigzag Width Regulating Plate
6. Automatic Bobbin Winder
7. Balance Wheel
8. Push Button
9. Stitch Regulating Dial
10. Lamp Switch
11. Bobbin Winder Thread Guide
12. Bobbin Winder Spool Pin
13. Drop Feeder (Push type)
14. Feed Dog
15. Needle Plate
16. Presser Foot
17. Needle Clamp
18. Thread Tension Dial
19. Check Spring
20. Hinged Plate
21. Presser Foot Thumb Screw
22. Thread Guide Bar

📹**Exercise 4. Listen to the text. Write out the new words given below into your dictionary and make up short situation with them.**

A model of the machine
The feed let the machine
The modern sewing machine
The feed let the machine
Substantially similar
The eye-pointed needle

✍**Exercise 5. Make up the sentences in the Past Tense with the groups of words given below.**

1. a contract /in 1830 / /with/ Auguste Ferrand/ he signed
2. museum/science /of the machine/ is exhibited /a model /at the/London
3 American /the first/ sewing machine/lockstitch/was invented / in 1832

4 through /curved needle /horizontally/ the fabric/ the moved
5 John Fishe/ was the device/ built. by English / inventor

🗝Exercise 6. TESTS

1.The first practical and widely used sewing machine was invented…

a) Walter Hun
b) by Barthelemy Tnimonnier
c) Balthasar Krems
d)Thomas Saint

2. However, the …… was burned down.
a) machines
b) device
c) towns
d) factory

3. The curved needle moved ….the fabric horizontally.
a) between
b) through
c) behind of
d) across

4. The first American lockstitch sewing machine was invented …
a) John Adams Doge and John Knowles
b) An Austrian tailor, Josef Madersperger
c) by Walter Hunt in 1832
d) by Barthelemy Tnimonnier

5. John Fisher …1844 …the processing lace materials
a) in/ on/ for
b) in/ for/ at
c) in / for/ of
d) on/ for/ of

🗣Exercise 7. Put all possible types of questions to the text.

LISTENING TASK 2

1.Listen to the text and complete the sentences below

1.Its low cost, portability, and simplicity promoted a decentralized industry based on unskilled labor, ……

2. Consequently, most production was carried on by small, ……

3. Since sewing machines cost relatively little—$50 for some models in 1858—…….

4.But since adding more machines to a shop introduced few economies of scale

1.Listen to the text and match the words

1	characteristics …	**A** men's wear trade
2	Since sewing machines cost …	**B** and simplicity
3	Especially in the …	**C** of the sewing machine
4	Its low cost, portability,	**D** to a shop introduced few economies of scale
5	But since adding more machines	**E** relatively little

Unit 1Lesson 3.HISTORY OF CLOTHING. CLOTH CONSTRUCTION

Exercise 1.Write Uzbek(Russian) equivalents of these words and make up your own sentences.

Productive forces
Means of production
Man-made
Handicraft
Multicentural
Tailor

Exercise 2.Read and translate the text.

History of clothing.
Cloth construction.

The history of cloth appearance goes back deep into the centuries, to different stages of the development of human beings. Appearance of cloth is connected with climatic conditions and their development, with the conditions of productive forces and means of production.

First, man fastened on his body the skin of animals, bark of the trees, leaves and plants in order to free his hands for a work. Further, the development of cloth is also connected with the development of material-practical activity of people.

The invention of tools and development of textile handicraft led to appearance of thickened, firstly, then to man-made cloth from fabrics. Tailor handicraft appeared in Western Europe in the XIIth century. In Russian cities it appeared in the XIVth century.

In Old Russia cloth was called as "Porty" or "Portishche" and as for the master making it he was called as "Portnoy". Later, in the XVIth century a new word "dress" replaced the old name of a cloth. Nevertheless, the word "portnoy" strictly entered the Russian language.

One of the main characteristics of the cloth is its form. Variety of forms of modern cloth is determined by its multicentural development under the influence of different historical and social-economic features and so on.

The history of cloth development can be divided into three stages according to the methods of production.

1. It is made of specially woven rectangular piece of fabric;
2. The cloth is made of rectangular pieces of fabrics, joined by stitches;
3. Cloth is made by form of a figure.

A clear example of the cloth of the first stage of development is the thickened cloth of Old Greeks and Romans. In India it has been kept till present days as national womanish costume.One of the oldest type of cloth, made of rectangular piece of fabric is the Roman tunic, which became the foundation of different tunica-form shirts. They are used by people of the North, Middle Asia , Russia and so on.

POST-TEXT EXERCISES.

Exercise 3. Listen to the text. Write out the new words given below into your dictionary and make up short situation with them.

development	variety of forms
oldest type of cloth	rectangular piece of fabric
methods of production	national costume

✍Exercise 4. Complete the sentences.

1.In Old Russia master making the cloth was called ... .

2.The old name of cloth "porty" was replaces by a new word ... .

3.The foundation of different tunico-form shirts was ... .

4.Thickened cloth of Old Greeks and Romans has been kept till present days in ... .

(old Roman tunics, portishche, portnoy, dress, Greece, India, Rome)

✍Exercise 5. Complete the dialogue.

A: What is the appearance of cloth connected with?

B: ...

A: What are the reasons of using the barks of trees, leaves, animal skin as a cloth by primitive people?

B: …

A: What caused the appearance of thickened and man-made cloth?

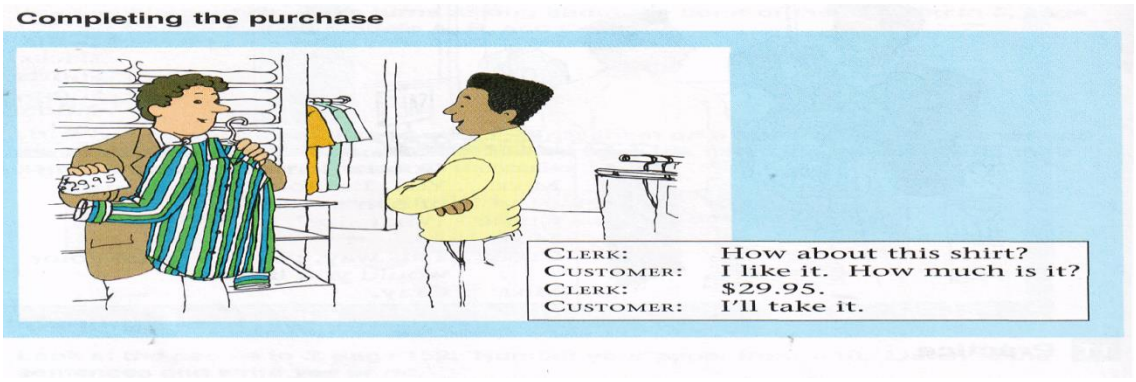
B: ...

A: In what century the word "portnoy" was replaced by the word "dress"?

B: ...

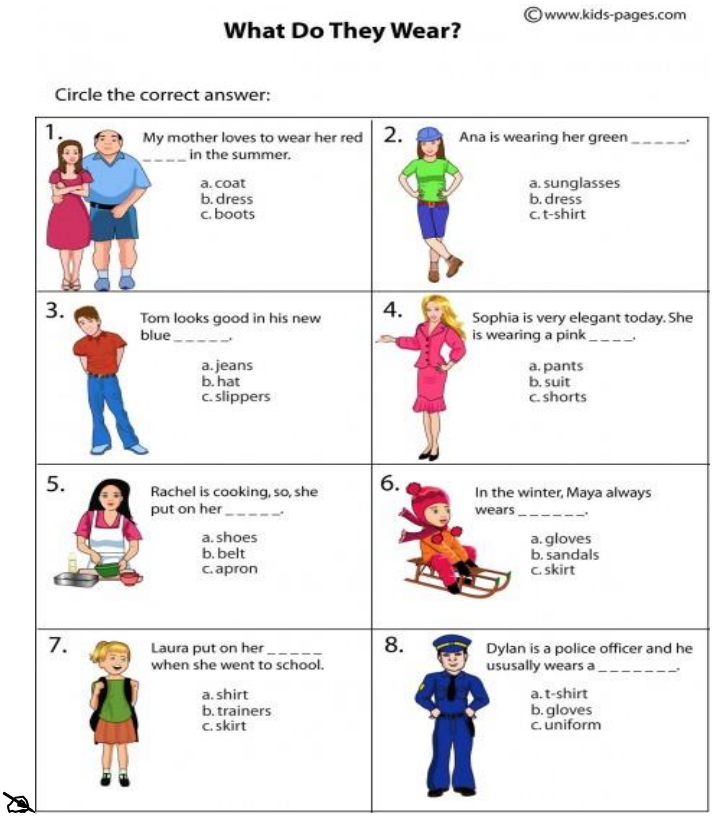
A: What is the main characteristic of cloth?

B: ...



✍Exercise 6. Make up sentences in Future Simple Passive with the following verbs.

Keep, lead, cause, become, make, be, join, replace, determine.



LISTENING TASK 3

1.Listen and decide which sentence is True , False, Not Given.

1. Elias Howe, born in Spencer, Massachusetts, created his sewing machine in 1885.

2.An important improvement on his machine was to have the needle running away from the point, starting from the eye.

3. He eventually won a case for patent infringement in 1954 and was awarded the right to claim royalties

4. After a lengthy stay in England trying to attract interest in his machine, he returned to America to find various people infringing his patent, among them Isaac Merritt Singer

5.). Whether or not the wool was produced in the village is inconclusive;

2.Listen to the text and correct the mistakes in the sentences.

1., Thomas Saint born in Spencer, Massachusetts, created his sewing machine in 1845

2. After a lengthy stay in German trying to attract interest in his machine

3.He moved to America to find various people infringing his patent, among them Isaac Merritt Singer

4.In 1854 and was awarded the right to claim royalties from the workers using ideas covered by his patent, including Singer.

Unit 2Lesson 1 ***MODERN TYPES OF SEWING MACHINES***

🗣Exercise 1. Write Uzbek(Russian) equivalents of these words and make up your own sentences.

Important	Improvement
Needle	to attract
interest	various
eventually	infringement
foot pedal	manufacturer
chain-stitch	partnership

📽 Exercise 2.Read and translate the text.

Elias Howe, born in Spencer, Massachusetts, created his sewing machine in 1845, using a similar method to Fisher's, except that the fabric was held vertically. An important improvement on his machine was to have the needle running away from the point, starting from the eye. After a lengthy stint in England trying to attract interest in his machine he returned to America to find various people infringing his patent, among them Isaac Merritt Singer. He eventually won a case for patent infringement in 1854 and was awarded the right to claim royalties from the manufacturers using ideas covered by his patent, including Singer.Singer had seen a rotary sewing machine being repaired in a Boston shop. As an engineer, he thought the device was clumsy and decided to design a better one. The machine he designed used a falling shuttle instead of a rotary one; the needle was mounted vertically and included a presser foot to hold the cloth in place. It had a fixed arm to hold the needle and included a basic tensioning system. This machine combined elements of

Thimonnier's, Hunt's, and Howe's machines. Singer was granted an American patent in 1851 and it was suggested he patent the foot pedal used to power some of his machines. However, the foot pedal had been in use for too long for a patent to be issued. When Howe learned of Singer's machine he took him to court. Howe won and Singer was forced to pay a lump sum for all machines already produced. Singer then took out a license under Howe's patent and paid him $1.15 per machine. Singer then entered a joint partnership with a lawyer named Edward Clark. They established the first hire-purchase scheme to allow people to buy their machines through payments over time.

Meanwhile Allen B. Wilson developed a shuttle that reciprocated ("vibrated") in a short arc, which was an improvement over Singer's and Howe's. However, John Bradshaw had patented a similar device and threatened to sue. Wilson decided to try a new method. He went into partnership with Nathaniel Wheeler to produce a machine with a rotary hook instead of a shuttle. This was far quieter and smoother than the other methods, and the Wheeler & Wilson Company produced more machines in the 1850s and 1860s than any other manufacturer. Wilson also invented the four-motion feed mechanism; this is still seen on every machine today. This had a forward, down, back, and up motion, which drew the cloth through in an even and smooth motion. Charles Miller patented the first machine to stitch buttonholes.Through the 1850s more and more companies were being formed and were trying to sue each other. This triggered a patent thicket known as the Sewing Machine War.In 1856 the Sewing Machine Combination was formed, consisting of Singer, Howe, Wheeler, Wilson, Grover and Baker. These four companies pooled their patents, meaning that all the other manufacturers had to obtain a license and pay $15 per machine. This lasted until 1877 when the last patent expired

POST-TEXT EXERCISES

Exercise 3. Copy out the 5th and 6th parts of the text and translate them in written form.

Exercise 4. Find synonyms to the given words.

An important, type, material, to attract, applicate, to develop, natural, valuable, to produce, suggest , except

Exercise 5. TESTS

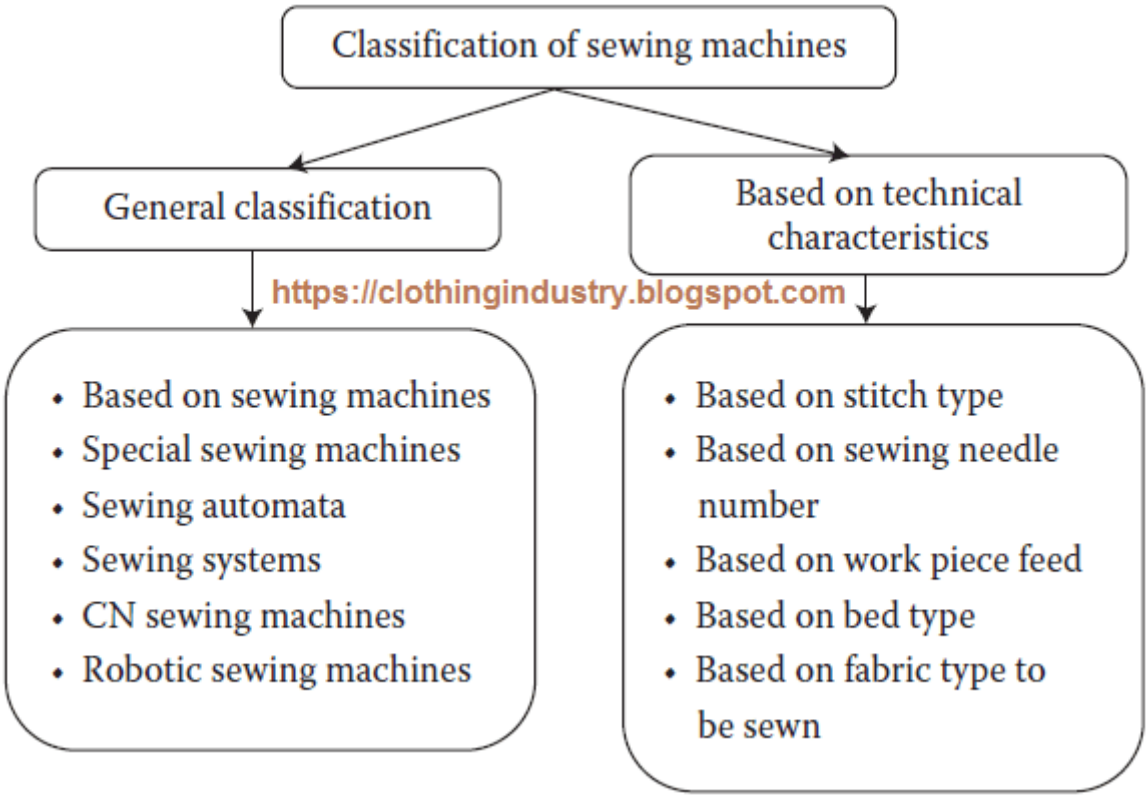
1) ….. born in Spencer, Massachusetts, created his sewing machine in 1845
a)Isaac Merritt Singer
b) Elias Howe
c) James Edward Allen Gibbs
d) Sewing Machine Combination

2. Singer ……a rotary sewing machine being repaired in a Boston shop
a) had seen
b) to see
c) have seen
d) have been seen

3. However, ….had been in use for too long for a patent to be issued.

a) four-motion feed mechanism
b) electrical
c) the foot pedal
d) a rotary hook
4. Wilson ….. to try a new method.
a) to decide
b) was decided
c) decides
d) decided

5) **…** patented the first machine to stitch buttonholes
a) Allen B. Wilson
b) Charles Miller
c) Isaac Merritt Singer **d)** James Edward Allen

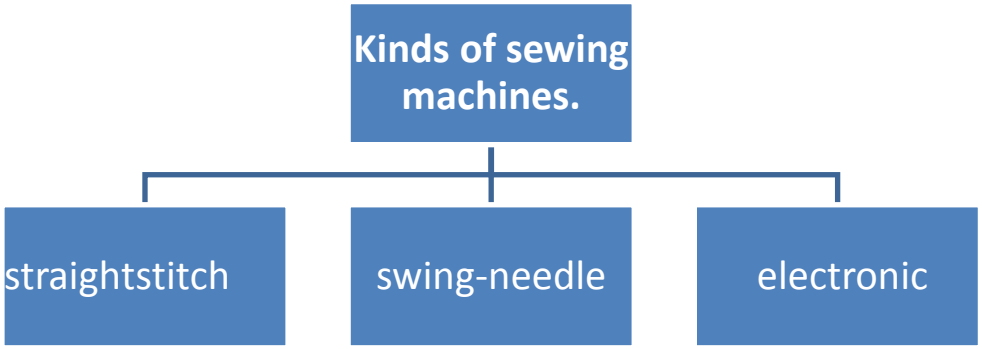


🗣Exercise 6. Write out the sentences from the text where Passive Voice is used and explain the rule.

Exercise 7. Answer the questions

1. Where did Elias Howe born?
2. When did Isaac Merritt Singer win a case for patent infringement?
3. Who invented the four-motion feed mechanism?
4. What kind of Sewing machines companies do you know?
5. Who patented the first chain-stitch single-thread sewing machine on June 2, 1857

Present your ideas on the topic by "clusters"



LISTENING TASK 1

1.Listen to the text and fill in the blanks.

Custom tailors also 1…… to make up some clothing in slack times to 2…. their workers busy. The first 3…….clothing factory was located in New York City in 1831. Early 4……. stores, such as Brooks Brothers, sold 5….. custom-and ready-made

clothing at 6 ……. But the output of 7…… clothing was inconsequential in quantity compared to the 8……of clothing made at 9……Much of the ready-made 10 ……. was of a cheap 11…… and was sold in the West or in 12…… for use by settlers and slaves. Because of its regular shipping connections with southern states

2.Listen to the text again and circle the right answer

1. Custom ……. also began to make up some clothing in slack times to keep their workers busy

a) shipping b) tailors c)cheap d) factory

2. Much of the …… clothing was of a cheap grade and was sold in the West or in the South for use by settlers and slaves.

a) quantity **b)** custom-and ready **c)** clothing made **d)** ready-made

3.The ready-to-wear industry made a tentative beginning in the men's branch of the trade in the late eighteenth century with the establishment of slop shops

a) ninteenth **b)** regular **c)** eighteenth **d)** settlers

4. Early haberdashery stores, such as Brooks Brothers, sold both ……-and ready-made clothing at midcentury.

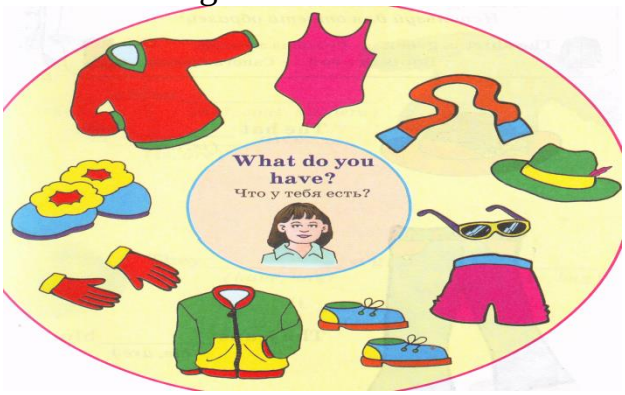
a) inconsequential **b)** custom **c)** industry **d)** cheap

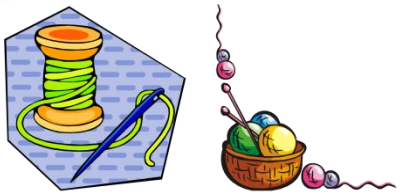
Unit 2

Lesson 2 ***FROM THE HISTORY OF CUTTING***

Exercise 1. Write Uzbek(Russian) equivalents of these words and make up your own sentences.

The first attempts	to cut the cloth
favorable conditions	sewing machines
the length and the width	measuring of size





Exercise 2.Read and translate the text.

From the History of Cutting.

The first attempts to cut the cloth had been made in the East, but hadn't got its development. The most favorable conditions were in Europe, when people wanted to underline the beauty of the body form by costume.

Middle century masters of the XIIth century made cuts on both sides of a cloth and joined the sides by strings, but it didn't create the beauty of the form. Cloth has been considered as monolith like architecture.

They suppose that the idea of dividing cloth into parts (details) had been borrowed from the inventors of chivalrous amours.

The first system of cutting has been invented in 1818 by a Frenchman Michel. In 1831 the system was replaced by a scale system, later appearance of another system of cutting caused the necessary of proportional measuring of size of some areas of cloth on the design. Before the appearance of cutting system, cloth was cut

only by “patrons”, which had been the family achievement. Only the length and the width were measured.

The application of the sewing machines in the last quarters of the XIXth century enrised the labor productivity and complicated the details of the form.

Active participation of women in manufacturing process made impossible the usage of traditional cloth in that type in which it had been in the XIXth century.

Later skirt was shortened and a new practical cloth, which consisted of three parts-skirt, blouse and jacket-appeared. In 1928 for the first time costume of mannish type had been introduced.

POST-TEXT EXERCISES

☝Exercise 3. Translate the sentences paying attention to the Future Indefinite Passive

The first attempts to cut the cloth had been made in the East, but it hadn’t got its development.

2. People wanted to underline the beauty of the body form by costume.
3. The idea to divide cloth into parts was borrowed from the inventors of chivalrous amours.

Exercise 4. Answer the questions according to the text.

1. Where had the first attempts to cut the cloth been made?
2. What was the middle century cloth like?
3. Where was the idea of dividing of cloth into parts borrowed from?
4. Who invented the first system of cutting?
5. What changes caused active participation of women in manufacturing process?

☝Exercise 5. Complete the sentences.

1. They suppose that ... .
2. Imagine that ... .
3. It is evidently ... .
4. They say that ... .

Exercise 6. Suit the dates and the events.

XII / costume of mannish type had been introduced.

1831 / Middle century masters made cuts on both sides of cloth and joined the sides by strings.

XIX / The application of the sewing machines enrised labor productivity.

1928 / the system was replaces by a scale system.1818 / Frenchman Michel invented the system of cutting.

Exercise 7. Retell the text.

LISTENING TASK 2

The design of social innovation. People are in fact not waiting for macroeconomist and world politicians to fix the problem of our crises ridden economies. People are already doing their part. They want to make sense, to make a difference. Individuals are already starting to explore new systems to work and live together in a more meaningful and sustainable way. They are starting to organize their own lives differently. They act. They show by doing that there are other ways to live a good life without at the same time threatening nature, other people, or their own inner peace. They are organizing themselves in time banks, home nursery, playgroups, car-sharing networks, producer markets retailing, ethical purchasing groups, community supported agriculture, self-help groups for the elderly, shared gardens, vegetable gardens in parks, eco-sustainable villages, local food catering, co-housing, neighborhood self management, local micro logistics, neighborhood launderettes & restaurants, 0 Km food services, tool exchange workshops, book exchange libraries, second hand fashion ateliers, and apparel swap groups.

1. Listen to the text again and circle the right answer

1.People are already doing their part. They _____to make sense, to make a difference.

a) waiting **b)** want **c)** together **d)** in fact

2. They are starting _____their own lives differently

a) problem b) to start c) ridden d) to organize

3. They show by doing that there are other ways to live a good life …….at the same time threatening nature, other people, or their own inner peace.

a) in fact **b)** without c) sustainable d) differently
4. They are ……in time banks, home nursery, playgroups, car-sharing networks,
a) fashion **b)** themselves **c)** eco-sustainable **d)** co-housing

2.Listen to the text and match the words

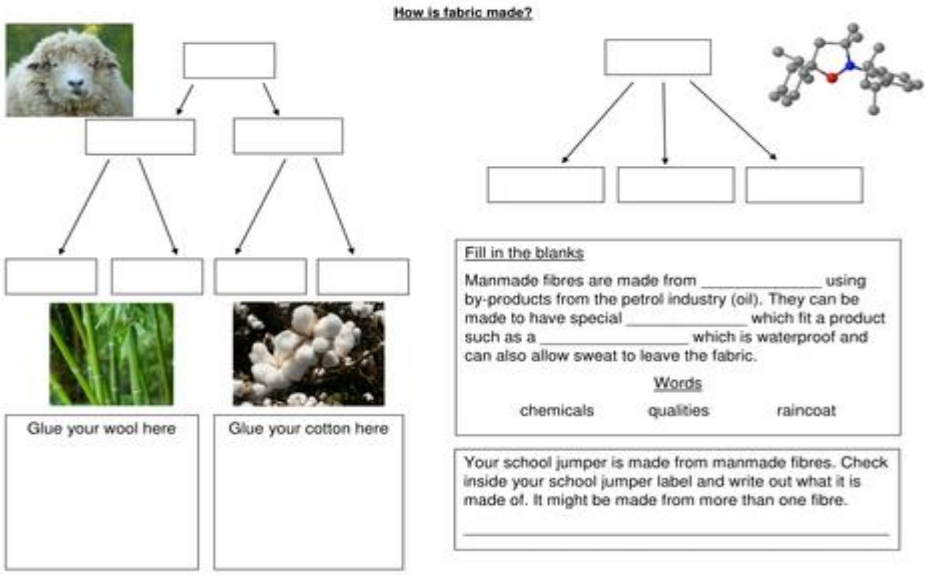
1	People are already ……	**A** there are other ways to live a good
2	They are starting to organize …..	**B** in time banks, home nursery, playgroups, car-sharing
3	They show by doing that	**C** doing their part
4	book exchange libraries, second hand fashion ateliers,	**D** and apparel swap groups.
5	They are organizing themselves	**E** their own lives differently

Unit 2 Lesson 3 SEWING CEREMONIAL CLOTHES

Exercise 1. Write Uzbek(Russian) equivalents of these words and make up your own sentences.

pieces of fabric
ready-made products
include
wedding
maintain
neckband
fiancee

greatly improved
inventor
a wide choice of fabrics
funeral
home appliances
embroidered.
shawl



Exercise 2.Read and translate the text.

Sewing.

Sewing is the process of attaching pieces of fabric together with a needle and thread. Many people enjoy sewing theirown clothes and such household articles as bedspreads, pillows,curtains and slipcovers. Clothing and other items sewn at home may cost less, wear better, and have more individuality than ready-made products; sewing also plays a vital role in the clothing, home furnishings, and other industries. Sewers have a wide choice of fabrics including cotton, lining, silk, and wool, which are made from planter animal fibers. Other fabrics consist of manufactured fibers, sometimes called synthetics. They include polyester, nylon and rayon.

People in Western Europe and Central Asia began to sew using bone needles, more than 17000 years ago. Most sewing was done by hand until the 1800's in 1846 an American inventor named Elias patented the first practical sewing machine. Sewing machines have been greatly improved through the years, and most sewing today is done by machine.

Before sewing machines were invented, women spent a large amount of their time on maintaining family clothing. Middle-class housewives, even with the aid of a hired seamstress, would have to spend several days of every month on this task. It would

take a seamstress some 14 hours to make a dress shirt for a man; a dress took 10 hours, and a pair of summer pants nearly three hours. Most individuals would have only two sets of clothing: a work outfit and a Sunday outfit.

Sewing machines reduced the time for making a dress shirt to one hour 15 minutes, the time to make a dress to an hour, and the time for a pair of summer pants to 38 minutes. This reduced labor resulted in women having a diminished role inhousehold

management, and allowed more hours for their

Ceremonial clothes.

Ceremonial clothes had been divided into wedding and funeral. Girl's dowry was ready long before the wedding. Fabrics and clothes, alongside with different material goods, home appliances, were included in dowry. Biggest attraction in wedding clothes was drawn to white colour, as the symbol of happiness; special white cotton dress was sewed for wedding. Usually cut of the dress was made tunica like with popular at that period style of neckband. Dress was made very long (to the ankles) with long and wide sleeves, covering hands. White dresses are still saved. Head was covered with white shawl, sometimes embroidered. Wedding wide trousers were made in tunica form from silk, cotton fabrics and mostly from han-atlas. New footwear ichigi and shoes were worn during wedding ceremony.

During the visit of fiancee house, future wife had worn yashmak or robe, face was covered with light net (Samarkand, Bukhara). On the second day of wedding, during the kelin salom ceremony, fiancee had placed shawl on her right hand. That shawl was embroidered with patterns (Samarkand).

Fiancee dowry had included from the 15th to 20th solemnity dresses (with usual cut — tunica). Dresses were made of local and imported fabrics. Halat-mursak, camisole or nimcha were worn over the dress. Men's wedding costume was simpler and monotone. White shirts and pants, white chalm and tubeteyka. Quilted robe of local fabric was worn over it, and was supported with belt belbog. Footwear was made of leather, boots mostly. . Wedding dresses were made with accordance with social status: poor families sewed clothes from handmade cotton fabric, rich families — from half-silk, silk and imported expensive material — farangi.

POST-TEXT EXERCISES.

Exercise 3. Complete the sentences.

1.Sewing is the process of attaching pieces….2…, sometimes called synthetics.3.Sewers have a wide choice of fabrics including cotton…4 Many people enjoy sewing theirown clothes….5…. wear better, and have more individuality than ready-made products.6. . Sewing machines have been greatly improved through the

Exersice 4. Write out the sentences where Passive is used.

Exersice 5. Find synonym pairs.

a) custom, ready, exclusive ,covering, material, next to,
b) alongside,prepared, wrapper, tradition, expensive

Exercise 6.Translate into your native language.

1. Girl's dowry was ready long before the wedding.2. Dress was made very long with long and wide sleeves, covering hands.3. Dresses were made of local and imported fabrics.4. Footwear was made of leather.5. Funeral clothes of Uzbeks were worn by women, men hadn't any funeral costumes.6 when any relative died, women had sewed dress of dark or black colour for three days.7. . In other regions of Uzbekistan such custom didn't existed.

Exercise 7. Make up sentences with the following words.
Attraction, imported fabrics, made of leather, wedding clothes,
special treating, funeral clothes, poor families, cotton dress.

Exercise 8. Put all possible types of questions to the text and retell the text.

Practice

Practice with a partner. Take turns being the clerk and the customer. Use the conversation model in *10* and the information below.

1. shirt / medium / blue
2. a pair of shorts / 40 / red
3. a pair of jeans / 32 / black
4. blouse / large / white
5. skirt / 12 / brown
6. a pair of pants / 6 / blue
7. blouse / large / yellow
8. T-shirt / extra large / green
9. a pair of shorts / 14 / pink
10. a pair of jeans / 10 / white

Interaction

Work with a partner. Take turns making a purchase.

CLERK:	Good _____ . May I help you?
CUSTOMER:	Yes. I'm looking for _____ .
CLERK:	What size?
CUSTOMER:	_____ .
CLERK:	This way, please. What color would you like?
CUSTOMER:	_____ .

LISTENING TASK 3

1.Listen to the text again and put the words in right order to make sentence.

1. Sewing animal hides for clothing and for shelter was used to stitch together

2. The indigenous peoples of the to assemble tipi shelters American Plains and Canadian Prairies used sophisticated sewing methods

3. Sewing weaving of plant leaves in Africa was combined with the to create baskets.

4. The weaving natural fibres originated in the Middle East of cloth from around 4000 BC

2.Listen to the text again and circle the right answer

1. Sewing has …….history estimated to begin during the Paleolithic Era

1. a) an ancient **b)** animal **c)** cloth **d)** sewing

2. Sewing was …….with the weaving of plant leaves in Africa to create baskets

a) to create **b)** combined **c)** weaving **d)** development.

3. The weaving of cloth from …… originated in the Middle East around 4000 BC.
a) natural fibres b) used c) woven d) covered

4. In Africa to …… baskets, such as those made by Zulu weavers, who used thin strips of palm leaf as "thread"

a) development **b)** assemble **c)** needles **d)** create

Unit 3 Lesson1 TRADITIONAL CLOTHES STYLE

🗣Exercise 1. Write Uzbek(Russian) equivalents of these words and make up your own sentence.

In spite of	condition
foundation	cut
collar	Professional
straightly	square shape
peculiarity	to prevent

🗣Exercise 2. Read and translate the text

Traditional clothes style.

In spite of certain availability of the national and local peculiarities, the ancient garb of all Central Asian nations living under conditions of cultural assimilation during many centuries, has one common style foundation, conditionally named in ethnography as tunic style — «tugri bichik».

This style was completed in Uzbekistan in two options, both options existed during a long time which is said by wall-paintings of early mediaeval palaces and miniatures of XVth-XIXth centuries as well.Traditional Uzbek clothes, mainly, consisted of the shirt «kuylak», trousers «ishton» and dress «tun». While their sewing the fabric was measured with fingers: so, the distance between thumb and little finger in open palm was called «karich», the distance between four fingers both in open palm and closed one was called 1, 2, 3 etc.The clothes was usually cut with the knife tearing the fabric along the straight thread to the pieces of the necessary size, and scissors were used only in canted parts of the clothes. It was considered favourable «khosiyatii» to cut the clothes on Wednesday, Thursday as well as put it on these days. Before, almost each woman was sewing for the family. Professional tailors existed as well who were doing clothes according to the order or for sale and were called «tunchi», «paranji tikuvchi», «mursak tikuvchi», «bichikchi», «chevar»; but when sewing machine appeared in the households they started to be called «machinachi» as well.

In the first option of tunic style — «tugri bichik» — the stature «buyi», «kaddi» (front and back) of the shirt «kuylak» or the dress «tun» was made from one of one and half portion of fabric (usually the local fabric was narrow — from 24 to 51 cm) bent on shoulders. The place for collar was cut at the shoulders level. «Yaktak» or dress «tun» differed from the shirt «kuylak» with the axial cut in the front and the gores «chalgay» fixed to the cuts from lap to breast forming the dress wraparound. On the back stick-up collar narrowed to the end was closed with gore «chalgay» at the breast. The collar was cut from the two parts and quilted with frequent stitch on the thin layer of cotton, in the result it became as the hard griff.

People used to call it «yaktak yeka». To the stature hips from the armhole to the lap the side-pieces «yen» were fixed straightly along the cut. This sleeves style peculiarity on the cross thread was especially clearly seen in the clothes from the stripped fabric of the Central Asian nations. The gore «kulpak, kulfak» of three-cornered or square shape was fixed between the sleeve and side-piece and was used to prevent this place from the cut. This option of the tunic style is wide spread in all the regions of Uzbekistan since the style of Fergana shirt «yaktak» is the basis of this style, in some places it is called «yaktak bichik» as well.

✍Exercise 3 Put correct prepositions from the text.

1. The distance …thumb and little finger … open palm was called «karich»
2. This style was completed … Uzbekistan … two options, … options existed during a long time.3.The place …. collar was cut …. the shoulders level. 4.Professional tailors existed as well who were doing clothes ……the order.5. … the stature hips …. the armhole to the lap the side-pieces «yen» were fixed straightly … the cut.

✍Exercise 4. Define antonyms of the following words.

national, ancient, traditional , completed, to be closed,
to prevent, interesting, narrow, vertical, to offer.

✍Exercise 5.Translate the following sentences into Uzbek (Russian).

1.This style was completed in Uzbekistan in two options 2. Traditional Uzbek clothes, mainly, consisted of the shirt , trousers and dress .3. The place for collar was cut at the shoulders level.4. The clothes was usually cut with the knife tearing the fabric along the straight thread to the pieces of the necessary size.5 The cuts «yirtmoch» were done on the hips of «mursak», «kaltachi» and «elak» like on the male dresses for the footstep increase.

LISTENING TASK

1.Listen to the text and unjumble the words

1	ingrais	
2	oringtail	
3	ufacmanture	
4	prenarylimi	
5	hingclot	

6	enwom	
7	ousehhold	
8	dmersrum	

2.Listen to the text again and decide whether the statement True or False.

1.In the colonial period fine imported textiles, including clothing and sofa and table linens, were costly items.

2. But in the average family all stages of clothing manufacture were carried on in the home.

3. The preliminary stages of spinning and weaving were eliminated from home work after the 1930s.

4. Machine-made cloth was sold to rural householders through country stores and traveling drummers.

5 Tailoring shops, particularly in the larger countries, produced up-to-date, custom-made clothing for the well-to-do.

Unit 3 Lesson 2. MODERN CLOTHES.

✍Exercise 1. Write Uzbek(Russian) equivalents of these words and make up your own sentence.

difficult way	development
suffered	contradictions
took place	main labor sources.
had protected	national specific features.
in accordance	the changes of fashion.

Interaction

Complete the purchase for a shirt, tie, skirt, or blouse.

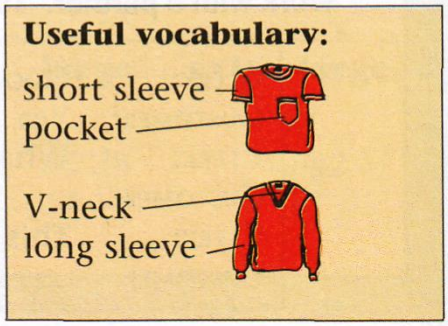
A: How about this _____ ?
B: I like it. How much is it?
A: _____ .
B: I'll take it.

Reading

Before You Read

1. What kind of advertisements do you find in magazines and newspapers?
2. When do people order things by mail?

Useful vocabulary:



Exercise 2. Read and translate the text.

Modern clothes.

Folk clothes had passed a difficult way of development through several decades of 20th centuries. Due to social-economical conditions folk life had suffered from many contradictions. In folk traditional clothes new clothes had existed with traditional ones. Alongside with modern city fashions old recovered forms of clothes had still existed. Clothes of different generations had changed in some kind. Temps of development were different: in 1920's sufficient changes took place in men costume; later changes took place inwomen clothes. The development of clothes had differed in different regions. Uzbekistan had still remained as source adjunct of Russia. Uzbekistan agriculture was directed on cottonproduction, which required huge Jabor recourses. Soviet state had considered Uzbek women, which were in charge of house keeping for centuries, as main labor sources.

Starting from 1927-1929, with active carrying out of «Hudjum», way of life, which was forming for centuries, had seriously changed. Way of life and clothes and life of women had seriously changed. Long dresses were substituted with short ones with cut coquette, made especially for agriculture labor. In women costume essential traditions were still saved. Headgear was compulsory, it had protected head against sun in warm (days and against cold and wind in cold times. Outdoor dresses were made of silk fabrics, han-atlas, panvalvet, wool. In cold weather jacket or wool overcoat was worn over the dress. Fabric made jackets and cloak, mostly imported from other countries, were used as overcoats of young women and girls. Head was covered with wool shawl or with fur cap. The clothes of women of 60 years, both everyday and holiday, had fully saved national specific features.

In reale time men wear besilly modern cloth. In summer time — usual men clothes — shirts with long or short sleeves, pants of thick wool or artificial fabric,

cotton socks and shoes. In cold times — jacket is usually worn over shirt, cap or tubeteyka is worn on the head. Two-season coats and winter coats still remain. In all regions cap had became warm headgear.

Children's clothes took a lot of changes. Most parents, despite of customs, prepare little shirts, caps and so on for baby. Those wares are bought in the shops or made by themselves in accordance with fabric patterns. As soon as baby begins sitting and actively moving, he is dressed in shirts, shoes, warm wool socks, etc. By the time of 1, 5-2 year's baby has full sets of clothes for every season. Starting from first year of life, parents care about his warm clothes: they buy cloak and warm cap and shoes. Almost all clothes, especially of children of older age, are fabric made. So, traditional features are almost invisible.

But, in village areas, dress their boys in quilted chapans, tubeteykas and girls are dressed in dresses with cut coquettes, tubeteyka and long lozim as headgear.

So, national clothes of Uzbek had suffered sufficient changes. Cut had changed, set and traditions of wearing decorations had disappeared. Headgear also changed. Age, season and other costume sets are characterized in other ways than in the past. Season clothes became compulsory in wardrobe of any person, despite of the age and family status. Due to wide choice of wares in trading network, it had become more different and fits to the changes of fashion.

Sewing - The Basics

Use the words in the Word Bank to complete the paragraphs below

Paleolithic	sheets	button	seamstress	needle	machine
clothing	weaving	stitches	repair	sew	

Sewing is the craft of attaching objects using _____ made with a _____ and thread. Its use is nearly universal among human populations and dates back to _____ times. Sewing predates the _____ of cloth.

Sewing is used primarily to produce _____ and household furnishings such as _____ and table cloths.

Most sewing in the western world is done by_____. Some people _____ clothes for themselves and their families. More often home sewers sew to _____ clothes, such as mending a torn sleeve or replacing a loose _____. A person who sews for a living is known as a _____, dressmaker or tailor.

Sewing Needles - Internet Research

1. What is a sewing needle?

_____

2. What were the first sewing needles often made from?

_____

3. What is the hole at the non-pointed end of a hand sewing needle for?

_____

4. Name four different types of hand sewing needle and describe briefly what each is used for.

_____
_____
_____
_____
_____
_____
_____

☝Exercise 3.Complete the sentences.

1…… clothes had existed with traditional ones.2. Clothes of different generations….3. The development of clothes …..4. …. wool shawl or with fur cap.
5. . Headgear was compulsory, it had protected……6. Children's clothes took….
7….. by themselves in accordance with fabric patterns.8. Almost all clothes, especially of children… .

✍Exercise 4. Open the brackets using the correct form of the Passive voice.
1. Long dresses (to substitute) with short ones with cut coquette, made especially for agriculture labor.2. Outdoor dresses (to make) of silk fabrics, han-atlas, panvalvet, wool.3. Fabric made jackets and cloak, mostly imported from other countries, (to use) as overcoats of young women and girls.4. Those wares (to buy) in the shops or made by themselves in accordance with fabric patterns.5. Age, season and other costume sets (to characterize) in other ways than in the past.

Exercise 5.Answer the questions.

1. Why had folk clothes passed a difficult way in 20 centuries? 2. When did the changes take place in men and women clothes? 3. Why headgear was compulsory? 4. What changes did happen in children's clothes? 5. What kind of clothes did people wear in village areas?

🗣Exercise 6. Make up sentenceses

LISTENING TASK

1. Listen and decide which sentence is True , False, Not Given.

1.There is a variation in colour ranging from off-white to a black- brown; two large pieces from a shawl have a golden-brown hue but whether this is the result of dyeing the flax will not be known until a sample has been analysed.

2. Consequently, most production was carried on by small, marginal firms known as outside shops

3. It is presumed that the plants were grown locally and flax capsules have been recovered from the site Cotton has been identified by infrared microscopy

4 Two receipts for the sale of cotton were found amongst an archive of ostraka that dates to the second half of the 3rd century and belonged to London**.**

Listen to the text again and circle the right answer

1.Linen, usually in its unbleached form, was the …..yarn used at Kellis.

a) dyeing the flax b) recovered c) identified d)most common

2. There is a variation in colour ranging from to a light brown.

a)off-white b) blue c) dark red d) black brown

3.Two receipts for the sale of ….were found amongst an archive of ostraka that dates to the second half of the 3rd century

a) silk b) wool c) cotton d) fiber

Unit 3 Lesson3 KINDS OF SEWING MACHINES

Exercise 1. Write Uzbek(Russian) equivalents of these words and make up your own sentence.

Stitches	Strictly
decorative aspects,	sleeves.
straight-stitch	attachments
buttonholes	ruffles
cartridge	motion
embroiders	combines stitches.

Exercise **2. Read and translate the text**

Sewing machines can make a great variety of plain or patterned stitches. Ignoring strictly decorative aspects, over three dozen distinct stitch formations are formally recognized by the ISO 4915:1991 standard, involving one to seven separate threads to form the stitch.

There are three main types of sewing machines for the home: (1) straightstitch; (2) swing-needle; (3) electronic. All three kinds are available in sewing cabinet and portable models, and they may also have a free-arm, or open-arm, design for easier sewing around pant legs and sleeves.

Straight-stitch sewing machines are designed for simple sewing that requires no decorative stitching. Various attachments can be added to the machine to help make buttonholes, ruffles, and hems.

Swing needle sewing machines, also called zigzag sewing machines, are designed for special stitching as well as straight stitching. The needle swing from side to side to make zigzag and other special stitches.

Electronic sewing machines, are designed to make all kinds of stitches. The touch of button or the insertion of a cartridge changes the motion of the needle so that it embroiders, makes buttonholes, monograms, or combines stitches. Electronic sewing machines have become increasingly computerized. For example, some machines can measure a button and then make as many button holes of the same size as are needed.

Most sewing machine manufacturers make all the main types of machines. Electronic machines are the most expensive. Many of the sewing machines on which zigzag stitching can be done are manufactured in Europe. The Anker and the Pfaff machines come from Germany: the Necchi and the Borletti from Italy and the Viking from Sweden.

.

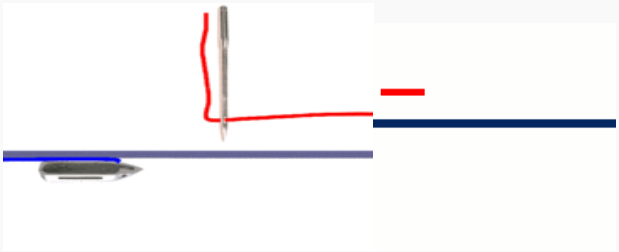
Chainstitch

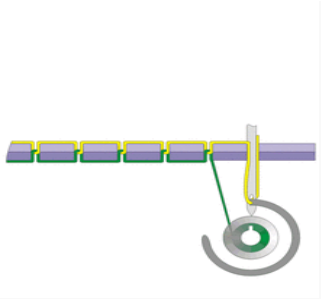
Chainstitch was used by early sewing machines and has two major drawbacks:

- The stitch is not self-locking, and if the thread breaks at any point or is not tied at both ends, the whole length of stitching comes out. It is also easily ripped out.
- The direction of sewing cannot be changed much from one stitch to the next, or the stitching process fails.

A better stitch was found in the lockstitch. The chainstitch is still used today in clothing manufacture, though due to its major drawback it is generally paired with an overlockstitch along the same seam.

Lockstitch]





Formation of a lock-stitch using a boat shuttle as employed in early domestic machines
Lockstitch utilising a rotating hook invented by Allen B Wilson. This is employed on many modern machines
Formation of the double locking chain stitch

Lockstitch is the familiar stitch performed by most household sewing machines and most industrial "single needle" sewing machines from two threads, one passed through a needle and one coming from a bobbin or shuttle. Each thread stays on the same side of the material being sewn, interlacing with the other thread at each needle hole by means of a bobbin driver. As a result, a lockstitch can be formed anywhere on the material being sewn; it does not need to be near an edge.

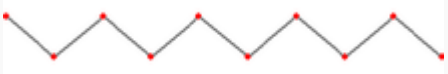
Overlock]

Overlock, also known as "serging" or "serger stitch", can be formed with one to four threads, one or two needles, and one or two loopers. Overlock sewing machines are usually equipped with knives that trim or create the edge immediately in front of the stitch formation. Household and industrial overlock machines are commonly used for garment seams in knit or stretchy fabrics, for garment seams where the fabric is light enough that the seam does not need to be pressed open, and for protecting edges against raveling. Machines using two to four threads are most common, and frequently one machine can be configured for several varieties of overlock stitch. Overlock machines with five or more threads usually make both a chainstitch with one needle and one looper, and an overlock stitch with the remaining needles and loopers. This combination is known as a "safety stitch". A similar machine used for stretch fabrics is called a *mock safety*.

Coverstitch

Coverstitch is formed by two or more needles and one or two loopers. Like lockstitch and chainstitch, coverstitch can be formed anywhere on the material being sewn. One looper manipulates a thread below the material being sewn, forming a bottom cover stitch against the needle threads. An additional looper above the material can form a top cover stitch simultaneously. The needle threads form parallel rows, while the looper threads cross back and forth all the needle rows. Coverstitch is so-called because the grid of crossing needle and looper threads covers raw seam edges, much as the overlock stitch does. It is widely used in garment construction, particularly for attaching trims and flat seaming where the raw edges can be finished in the same operation as forming the seam.

Zigzag stitch



A zigzag stitch is variant geometry of the lockstitch. It is a back-and-forth stitch used where a straight stitch will not suffice, such as in preventing raveling of a fabric, in stitching stretchable fabrics, and in temporarily joining two work pieces edge-to-edge.

When creating a zigzag stitch, the back-and-forth motion of the sewing machine's needle is controlled by a cam. As the cam rotates, a fingerlike follower, connected to the needle bar, rides along the cam and tracks its indentations. As the follower moves in and out, the needle bar is moved from side to side.[21] Very old sewing machines lack this hardware and so cannot natively produce a zigzag stitch, but there are often shank-driven attachments available which enable them to do so.

✍Exercise 3. Find the words (1-10) in the text above. Can you guess the meaning from context?

1 .Sewing machines can……

2. Straight-stitch sewing machines are designed for simple…
3. Electronic sewing machines, are ….

4.Electronic sewing machines have…

5. Coverstitch is formed by two or more…
6. A zigzag stitch is variant….

7. A similar machine used for stretch…

a) …. geometry of the lockstitch.

b)…. fabrics is called a *mock safety*.

c) ….. become increasingly computerized.

d) ….make a great variety of plain or patterned stitches.

e) …. designed to make all kinds of stitches
f) …. sewing that requires no decorative stitching
e)….. needles and one or two loopers.

✍Exercise 4. Put correct prepositions from the text.

1. There are three main types … sewing machines …the home.2. The direction… sewing cannot be changed much … one stitch … the next. 3. Coverstitch is formed …. two or more needles and one or two loopers.4. Coverstitch is so-called… the grid … crossing needle and looper threads covers raw seam edges.5. The Anker and the Pfaff machines come … Germany

✍Exercise 4.Write a short presentation summarizing your discussion. Then ask one person from your group to give a summary of the group's ideas to the rest of the class.

Exercise 5. Decide whether the following statements are true or false according to the recording

1. Electronic sewing machines have become increasingly computerized.
2. The needle swing from side to side special stitches.
3. Electronic machines are the most expensive
4. Electronic machines is not expensive
5. A better stitch was found in the lockstitch.
6. A zigzag stitch is variant geometry of the lockstitch
7. Coverstitch is formed by two or more two loopers
8. As the follower moves in and out, the needle bar is moved from needle to needle

Exercise 6. 🗝 TESTS

1. Lockstitch is the familiar stitch performed by most household sewing machines and most industrial …."single needle" sewing machines
   a) "single needle"
   b) sewing
   c)double needle
   d)single stich

2. There are three main types of sewing machines for the home:
   a) straightstitch; swing-needle; electronic
   b) lockstitch and chainstitch, coverstitch
   c) double needle
   d) single stich

3. ….. sewing machines are usually equipped with knives that trim or create the edge immediately in front of the stitch formation

a) Zigzag stitch
b) Chainstitch
c) Overlock
d)) lockstitch

4 …….sewing machines, are designed to make all kinds of stitches.
a) Straight-stitch.
b) Swing needle
c) Most sewing machine
d) Electronic .

5 The Anker and the Pfaff machines come from:

a)England
b) Germany
c) Italy
d) Sweden.

Exercise 7. Change the following sentences from Active into Passive.

1. Straight-stitch sewing machines are designed for simple sewing that requires no decorative stitching

2. Swing needle sewing machines, also called zigzag sewing machines, are designed for special stitching as well as straight stitching

3. Electronic sewing machines, are designed to make all kinds of stitches

4. Overlock sewing machines are usually equipped with knives that trim or create the edge immediately in front of the stitch formation.

5. This combination is known as a "safety stitch"

List enin

g task

1.Listen to the text and fill in the gaps

If this colour is not _1_____at this stage than it will be very __2____ to attain the desired shade in___3____ process. The main 4____ of the bleaching process is__5___ of natural coloring matter___6__ to make the fabric perfect ___7__ with minimum __8___ and within the shortest _9___time. Bleaching is 9____ carried out by oxidative process.

2.Listen and decide which sentence is True , False, Not Given.

1. If this colour is not removed at this stage than it will be very easy to attain the desired shade in dyeing process.

2. Bleaching is generally carried out by oxidative process

3. Sodium hypo chlorite, Sodium peroxide and Hydrogen peroxide.

4. Hydrogen peroxide is also called as "Universal bleaching agent".

5. Sewing was used to stitch together animal hides for clothing and for shelter

Unit 4 Lesson 1 OVERLOCK SEWING MACHINES

Exercise 1. Write Uzbek(Russian) equivalents of these words and make up your own sentences.

partnership	purchasing
licence.	instructions
a factory	acquired
customers,	consumers
a vibrating shuttle	decoration

Exercise 2.Read and translate the text.

William Jones started making sewing machines in 1859 and in 1860 formed a partnership with Thomas Chadwick. As Chadwick & Jones, they manufactured sewing machines at Ashton-under-Lyne, England until 1863. Their machines used designs from Howe and Wilson produced under licence. Thomas Chadwick later joined Bradbury & Co. William Jones opened a factory in Guide Bridge, Manchester in 1869. In 1893 a Jones advertising sheet claimed that this factory was the "Largest Factory in England Exclusively Making First Class Sewing Machines". The firm was renamed as the Jones Sewing Machine Co. Ltd and was later acquired by Brother Industries of Japan, in 1968

Clothing manufacturers were the first sewing machine customers, and used them to produce the first ready-to-wear clothing and shoes. In the 1860s consumers began purchasing them, and the machines—ranging in price from £6 to £15 in Britain depending on features—became very common in middle-class homes. Owners were much more likely to spend free time with their machines to make and mend clothing for their families than to visit friends, and women's magazines and household guides such as *Mrs Beeton's* offered dress patterns and instructions. A sewing machine could produce a man's shirt in about one hour, compared to 14 1/2 hours by hand.

In 1877 the world's first crochet machine was invented and patented by Joseph M. Merrow, then-president of what had started in the 1840s as a machine shop to develop specialized machinery for the knitting operations. This crochet machine was the first production overlock sewing machine. The Merrow Machine Company went on to become one of the largest American Manufacturers of overlock sewing machines, and continues to be a global presence in the 21st century as the last American over-lock sewing machine manufacturer.

In 1885 Singer patented the Singer Vibrating Shuttle sewing machine, which used Allen B. Wilson's idea for a vibrating shuttle and was a better lockstitcher than the oscillating shuttles of the time. Millions of the machines, perhaps the world's first really practical sewing machine for domestic use, were produced until finally superseded by rotary shuttle machines in the 20th century. Sewing machines continued being made to roughly the same design, with more lavish decoration appearing until well into the 1900s.

The first electric machines were developed by Singer Sewing Co. and introduced in 1889. By the end of the First World War, Singer was offering hand, treadle and electric machines for sale. At first the electric machines were standard machines with a motor strapped on the side, but as more homes gained power, they became more popular and the motor was gradually introduced into the casing.

POST-TEXT EXERCISES

Exercise 3. Translate the sentences paying attention to the Infinitive.

1.Clothing manufacturers were the first sewing machine customers, and used them to produce the first ready-to-wear clothing and shoes. 2.Owners were much more likely to spend free time with their machines to make and mend clothing for their families than to visit friends.3. In the 1840s as a machine shop to develop specialized machinery for the knitting operations.4. The Merrow Machine Company went on to become one of the largest American Manufacturers of overlock sewing machines.Sewing machines continued being made to roughly the same design, with more lavish decoration appearing until well into the 1900s.

Exercise 4. Complete the sentences.

Thomas Chadwick later ….2. …."Largest Factory in England Exclusively Making First Class Sewing Machines". 3. In 1877 the world's first crochet machine was ….

4. A sewing machine could produce a man's shirt in about one hour, …….

5. ….Singer patented the Singer Vibrating Shuttle sewing machine.6. … were developed by Singer Sewing Co. and introduced in 1889.7. At first the electric machines were standard machines with a motor strapped on the side

Exercise 5. TESTS

1… the 1860s consumers began purchasing them, and the machines—ranging …price …..£6 to £15 in Britain

a) in /in/from
b) on/ in /for
c) under/ in / from
d) in/ in/ for

2. This crochet machine was the first production …. sewing machine.

a) shoes

b) overlock
c) knitting machine
d) crochet

3. Sewing machines continued …….to roughly the same design, with more lavish decoration appearing until well into the 1900s.

a) make
b) making
c) to be made
d) being made to

4. The first electric machines were developed by Singer Sewing Co. and introduced …..
a) in 1887
b) in 1889
c)in 1900
d) in 1883

5. By the end of the First World War, Singer was offering hand, treadle …
a) and electric machines for sale
b) the same design
c) better lockstitcher
d) overlock sewing machine

✍Exercise 6. Suit the dates and the events.

1. In 1885/..a Jones advertising sheet claimed that this factory was the "Largest Factory in England Exclusively Making First Class Sewing Machines".

2. In 1893 /… Singer patented the Singer Vibrating Shuttle sewing machine,

3 in 1889 /… the world's first crochet machine was invented and patented by Joseph M. Merrow

4. In 1877/… The first electric machines were developed by Singer Sewing Co. and introduced

✍ Exercise 7.Fill in the blanks with appropriate prepositions.
1.Owners were much more likely to spend free time …their machines to make and mend clothing … their families than to visit friends

2. Millions …the machines, perhaps the world's first really practical sewing machine domestic use.3. Sewing machines continued being made to roughly the same design,

with more lavish decoration appearing ….l well … the 1900s.4. The first electric machines were developed by Singer Sewing Co.5.

LISTENING TASK

1.Listen to the text and fill in the gaps

Looking into such _____Kristi Kuusk wanted to incorporate ____of the forgotten old wisdom into the _____possibilities of digital and otherwise new technologies. _____ approaching the integration of _____and technology she aimed to _____ and, through that also, see how new _____ of communicatingcan be a _____ towards sustainability in the fashion _____. After first steps of exploring _____ combinations of crafts and technology.

2.Listen to the text and match the words

1	While approaching the ……	**A** different combinations
2	After first steps of exploring …..	**B** series of practicing
3	Quick Response codes carrying…	**C** integration
4	This was a first tryout in this ….	**D** cultural information

Unit 4 Lesson 2 **SEWING MACHINE TOOLS**

Exercise 1. Write Uzbek(Russian) equivalents of these words and make up your own sentences.

loopers and bobbins
involves
forming stitches
drop feed
uncommon feed mechanism
making seams on caps
needle motion back
modified drop feed
cycle of needle
ways of feeding material
general categories
needle feed
joining fur
implementations
feed action
household machines

🗣**Exercise 2.Read and translate the text.**

Feed mechanisms

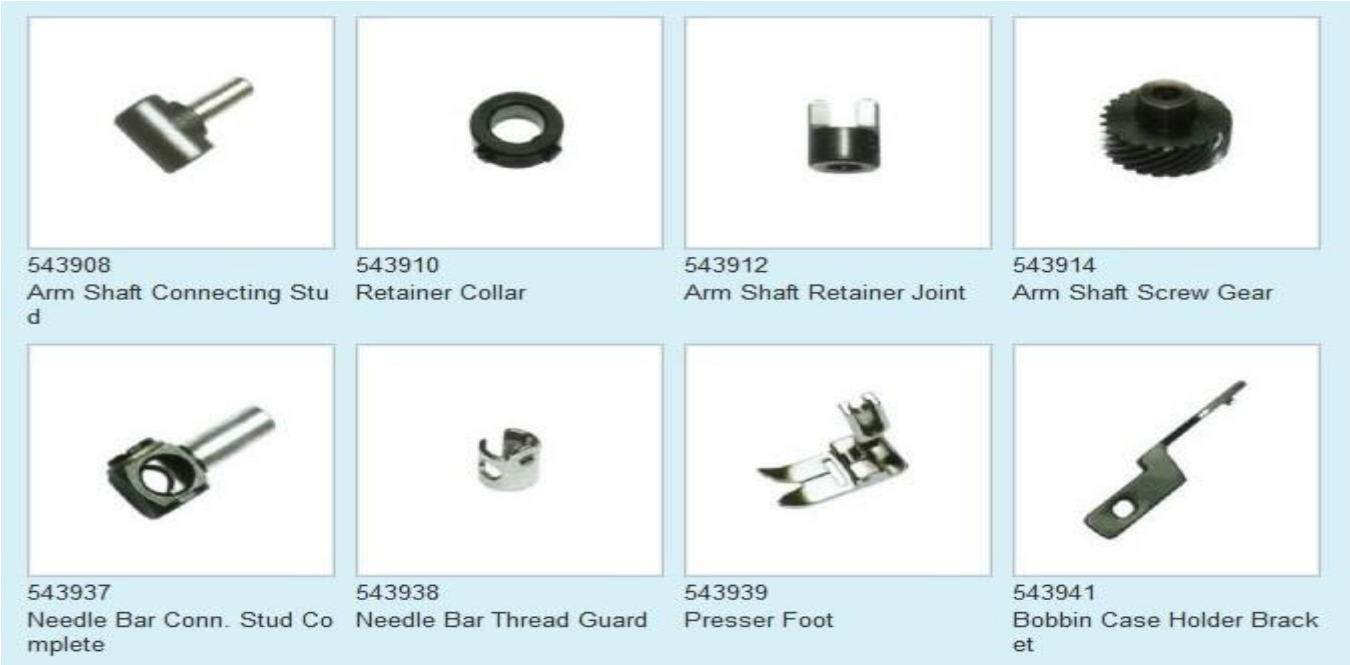
Besides the basic motion of needles, loopers and bobbins, the material being sewn must move so that each cycle of needle motion involves a different part of the material. This motion is known as feed, and sewing machines have almost as many ways of feeding material as they do of forming stitches. For general categories, there are: drop feed, needle feed, walking foot, puller, and manual. Often, multiple types of feed are used on the same machine. Besides these general categories, there are also uncommon feed mechanisms used in specific applications like edge joining fur, making seams on caps, and blindstitching.

Drop feed]

Presser foot raised with feed dogs visible

The drop feed mechanism is used by almost all household machines and involves a mechanism below the sewing surface of the machine. When the needle is withdrawn

from the material being sewn, a set of "feed dogs" is pushed up through slots in the machine surface, then dragged horizontally past the needle. The dogs are serrated to grip the material, and a "presser foot" is used to keep the material in contact with the dogs. At the end of their horizontal motion, the dogs are lowered again and returned to their original position while the needle makes its next pass through the material. While the needle is in the material, there is no feed action. Almost all household machines and the majority of industrial machines use drop feed. Differential feed is a variation of drop feed with two independent sets of dogs, one before and one after the needle. By changing their relative motions, these sets of dogs can be used to stretch or compress the material in the vicinity of the needle. This is extremely useful when sewing stretchy material, and overlock machines (heavily used for such materials) frequently have differential feed.



Needle feed A needle feed, used only in industrial machines, moves the material while the needle is in the material. In fact, the needle may be the primary feeding force. Some implementations of needle feed rock the axis of needle motion back and forth, while other implementations keep the axis vertical while moving it forward and back. In both cases, there is no feed action while the needle is out of the material.

Needle feed is often used in conjunction with a modified drop feed, and is very common on industrial two needle machines. Household machines do not use needle feed as a general rule.

Walking foot

A walking foot replaces the stationary presser foot with one that moves along with whatever other feed mechanisms the machine already has. As the walking foot moves, it shifts the workpiece along with it. It is most useful for sewing heavy materials where needle feed is mechanically inadequate, for spongy or cushioned materials where lifting the foot out of contact with the material helps in the feeding action, and for sewing many layers together where a drop feed will cause the lower layers to shift out of position with the upper layers.

Puller feed

Some factory machines and a few household machines are set up with an auxiliary*puller feed*, which grips the material being sewn (usually from behind the needles) and pulls it with a force and reliability usually not possible with other types of feed. Puller feeds are seldom built directly into the basic sewing machine. Their action must be synchronized with the needle and feed action built into the machine to avoid damaging the machine. Pullers are also limited to straight seams, or very nearly so. Despite their additional cost and limitations, pulling feeds are very useful when making large heavy items like tents and vehicle covers.

Manual feed

A manual feed is used primarily in freehand embroidery, quilting, and shoe repair. With manual feed, the stitch length and direction is controlled entirely by the motion of the material being sewn. Frequently some form of hoop or stabilizing material is used with fabric to keep the material under proper tension and aid in moving it around. Most household machines can be set for manual feed by disengaging the drop feed dogs. Most industrial machines can not be used for manual feed without actually removing the feed dogs.

Needles

Sewing machines use special needles tailored to their needs and to the character of the material being sewn.

Industrial and domestic

Industrial sewing machines, are larger, faster, and more varied in their size, cost, appearance, and task. Industrial machines, unlike domestic machines, performing single dedicated task and are capable of long hours of usage and as such have larger moving parts and comparatively much larger motors. Industrial machines are also more generic, a motor for almost any type of machine can work on any brand. An overlocker or a straight stitch machine motors are the same. Sewing feet, and bobbins between brands are also interchangeable. However, with domestic machines the motor, and to a lesser extent bobbins and sewing feet, are brand specific.

The motors on industrial machines, as with most of its components, lights, etc, are separate, usually mounted to the underside of the table. Domestic machines have their OEM motors mounted inside the machine. Industrial machines usually have two types of motors; a server motor (which is quiet when not in use), and the more

traditional clutch motor (which are always spinning; even when not in use). [22]

POST-TEXT EXERCISES

Exercise 3. Translate the sentences .

1. Most household machines can be set for manual feed by disengaging the drop feed dogs 2. Pullers are also limited to straight seams, or very nearly so. 3. . Sewing feet, and bobbins between brands are also interchangeable.4. As the walking foot moves, it shifts the workpiece along with it.5 A needle feed, used only in industrial machines, moves the material while the needle is in the material.

Exercise 4 Write correct names under the pictures

a)bobbin
b)needles
c)presser foot
d)drop feed
e)needle feed
f)walking foot
j) puller

1

2

3

4

5

Exercise 5. Unscramble the letters and write out the correct words

ialduinstr ------ Industrial

gewsin

achmines

saterf

rivaed

ocst

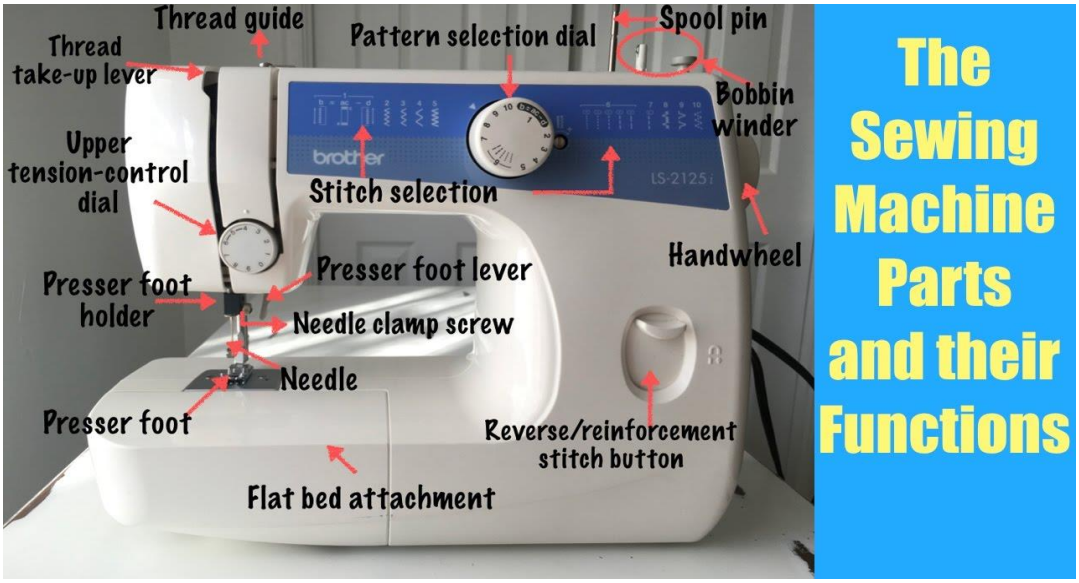
ara appence

esdomtic

legsin

Exercise 6. Complete the sentences

1. This motion is known as feed, and sewing machines have almost as …..
2. ……and bobbins between brands are also interchangeable.
3. However, with domestic machines the motor, and to a lesser extent …..
4. ……. are also limited to straight seams, or very nearly so.
5. A needle feed, used only in industrial machines, moves the material ….



4
2

LISTENING TASK

1.Listen to the text again and put the words in right order to make sentence.

1. More need a few more simple tools complex projects may only

2. rotary cutters may be used In addition to sewing shears, for cutting fabric

3. Seam rippers to remove mistaken stitches are used

4. A steam and a variety of pressing aids iron is used to press seams and garments

5. A pressing to protect the fabric from damage cloth may be used.

2.Listen to the text and unjumble the words

1	jectspro	
2	pfulhel	
3	itionadd	
4	takenmis	
5	entsgarm	
6	ricfab	

Unit 4 Lesson3 SPINNING.

✍Exercise 1. Write Uzbek(Russian) equivalents of these words and make up your own sentences.

Spinning	vast majority
involve	interlacing loops
processes	crocheting
needle.	Braiding
plaiting	knitting
textile art	together
fiber	tools
increase	individual spinners
production method	involves interlacing

🗣Exercise 2. Read and translate the text

Spinning is an ancient textile art in which plant, animal or syntheticfibers are twisted together to form yarn. For thousands of years, fiber was spun by hand using simple tools, the spindle and distaff. Only in the High Middle Ages did the spinning wheel increase the output of individual spinners, and mass-production only arose in the 18th century with the beginnings of the Industrial Revolution. Hand-spinning remains a popular handicraft.Weaving is a textile production method which involves interlacing a set of longer threads (called the warp) with a set of crossing threads (called the weft). This is done on a frame or machine known as a loom, of which there are a number of types. Some weaving is still done by hand, but the vast majority is mechanized.

Knitting and crocheting involve interlacing loops of yarn, which are formed either on a knitting needle or on a crochet hook, together in a line. The two processes are different in that knitting has several active loops at one time, on the knitting needle waiting to interlock with another loop, while crocheting never has more than one active loop on the needle.

Braiding or plaiting involves twisting threads together into cloth. Knitting involves tying threads together and is used in making macrame.Backed by profound experience of the industry, we are presenting a vast variety of **Spinning Frame.** These machines are widely used in the textile industry for producing good quality yarn. Owing to excellent features such as sturdy construction, optimum performance and high operating speed. Adding to this, we also offer these frames with customized specifications to meet the variegated needs of our valuable clients.

POST-TEXT EXERCISES

✍Exercise 3.Decide whether the following statesments are True or False according to the text.

1.Braiding or plaiting involves twisting threads together into cloth

2. Sewing is a textile production method which involves interlacing a set of longer threads

3. For thousands of years, fiber was spun by hand using simple tools.

4.Weaving and crocheting involve interlacing loops of yarn, which are formed either on a knitting needle or on a crochet hook, together in a line.

5**.** Hand-spinning remains a popular spinning.**6.** The two processes are different in that knitting has several active loops at one time.

Exercise 4. Circle the coorect answer

What is spinning? 

a)Spinning is a textile production method which involves interlacing a set of longer threads

b Spinning or plaiting involves twisting threads together into cloth.

c) Spinning is an ancient textile art in which plant, animal or syntheticfibers are twisted together to form yarn.

d) Spinning involves tying threads together and is used in making macrame.

Exercise 5 ☺☺☺ Put participants in groups of 3 and invite them to compare their answers.

Exercise 6. ☺ Ask participants to continue the list.

Possible answers

Hand-spinning remains…

a) one active loop on the needle.
b) a popular handicraft
c) majority is mechanized
d) threads together into cloth

Exercise 7. Discuss the following items.

1. Spinning is an ancient textile art.
2. Hand-spinning remains a popular handicraft
3. The origins of spinning fiber to make string or yarn.

LISTENING TASK

1.Listen again to the text and decide which statement is True,False or Not Given.

1.Traditionally, *fashion* is often defined as "the prevailing style or custom, utilizing sewing

2.Fashion is an ability to integrate different interests, needs and expectations into textile expressions based on aesthetics, function and economy.

3.Pressing and ironing are an essential part of many sewing projects, and require additional tools.

2.Listen to the text and complete the sentences below.

1. Fashion & Clothing will address an overallview of the value chain that consists of all the elements.

2. Utilizing clothing, accessories and hair to show or hide something about oneself",but this definition has expanded to make statements about lifestyle

3. . Fashion is an ability to integrate different interests, needs and expectations into textile expressions based on aesthetics, function and economy.

4. Political opinions, class, etc. and is often symbol-intensive

Unit 5 Lesson1 **NEW SPINNING MACHINES**

✍Exercise 1. Write Uzbek(Russian) equivalents of these words and make up your own sentences.

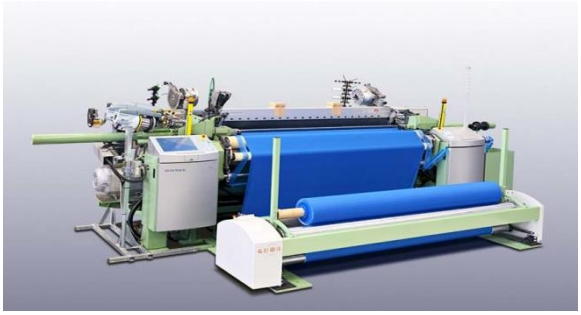
cotton yarn	demand
involve	interlacing loops
processes	crocheting
needle.	been invented
factory	together
cotton spinning	tools
increase	individual spinners
production method	

✍Exercise 2. Read and translate the text

New spinning machines helped bring abut that change in history known as the Industrial Revolution, when machines began to take the place of hand workers. The increased output of spinning factories created a demand for more cotton. This needled to the invention of Eli Whitney's cotton gin. With more thread to weave, the weavers developed better and faster power looms. Then came machines to knit, to make lace, or embroider, to cut out patterns, and finally to sew cloth into finished garments in large quantities.

Cotton spinning in a present-day factory is a typical example of most spinning. After the raw cotton has been cleaned and blended, it usually goes through an air duct system to the carding machines. These machines have huge rollers covered with wire teeth. Here the tangled fibers are straightened out and made to lie in straight, even rows. Then the fibers are rolled over and over one another to form slivers (SLY), which look loose ropes of soft cotton yarn. A sliver goes through the processes of drawing and roving, by which it is made finer, more even, and stronger. Spinning machines perform these operations and give the thread the required firmness and strength.

New machines have been invented to spin the old natural fibers, such as flax and hemp, and new machines are being made for other fibers, such as kapok and ramie.



POST-TEXT EXERCISES

✍Exercise 3.Read the text again discuss the statesment then share your ideas
✍Exercise 4 Discuss the following statements in your group.

Cotton spinning in a present-day factory is a typical example of most spinning.
New machines have been invented to spin the old natural fibers
New spinning machines helped bring abut that change in history known as the Industrial Revolution

Exercise 5. Test
1.With more thread to weave, the weavers developed …..power looms.
a) better and faster
b) better and slower
c) the best and fast
d) good and fast

2. This needled to the ….. of Eli Whitney's cotton gin
a)machine
b)spinning
c)handcraft
d) invention
3. …sliver goes through …. processes of drawing and roving, by which it is made finer
a) a/ a b)a / the
c)the/ the d)the/ an
✍Exercise 6 Put all possible questions to the text.

LISTENING TASK

1. Listen again to the text and circle the right answer

1.Cross-concepts between sports and ……as well
as fashion and workwear are rather rule than exception today.
a) cloth b) want c) fashion d) inseparable
2. *Fashion and function* are inseparable, when we talk about this totally ……industry today and tomorrow.
a) globalized b) sustainable c) account d) society
3. Fashion & clothing will combine ……..and insight into hard values.
a) keywords b) respect c) humility d) knowledge

2.Listen to the text and fill in the gaps
With *Fashion &* ____*1*____-we intend to participate and ____**2**___ the future from several **3**_____ and fashion aspects, led by the _4_____respect, humility ___5_____ in a sustainable ___6____. Fashion & clothing will __7____

knowledge and _____8____ into hard values – from the _9_____, artistic and creation perspectives to __10_____ and business perspectives - and soft values in the form of a sustainable society taking account **of __11_____**, wellbeing and the environment

Unit 5 Lesson 2 **SPUN YARN**

Exercise 1. Write Uzbek(Russian) equivalents of these words and make up your own sentences.

Spun yarn
staplefibers
a cohesive thread
Combining
synthetic fibers
natural fibers
widely used
blends
common
expensive
angora

Exercise 2. Read and translate the text

Spun yarn

Spun yarnis made by twisting or otherwise bonding staplefibers together to make a cohesive thread. Twisting fibers into yarn in the process called spinning can be dated back to the Upper Paleolithic, and yarn spinning was one of the very first processes to be industrialized. Spun yarns may contain a single type of fiber, or be a blend of various types. Combining synthetic fibers (which can have high strength, lustre, and fire retardant qualities) with natural fibers (which have good water absorbency and skin comforting qualities) is very common. The most widely used blends are cotton-polyester and wool-acrylic fiber blends. Blends of different natural fibers are common too, especially with more expensive fibers such as angora and cashmere.

Yarns are made up of a number of plies, each ply being a single spun yarn. These single plies of yarn are twisted in the opposite direction (plied) together to make a thicker yarn. Depending on the direction of this final twist, the yarn will be known as *s-twist* or *z-twist*. For a single ply, the direction of the final twist is the same as its original twist.

Filament yarn consists of filament fibers (very long continuous fibers) either twisted or only grouped together. Thicker monofilaments are typically used for

industrial purposes rather than fabric production or decoration. Silk is a natural filament, and synthetic filament yarns are used to produce silk-like effects.

Texturized yarns are made by a process of air texturizing (sometimes referred to as *taslanizing*), which combines multiple filament yarns into a yarn with some of the characteristics of spun yarns.

POST-TEXT EXERCISES

Exercise 3 Check answers with the whole group.
Ask participants the following questions one by one and elicit answers:
1. Why do think you need to know the spun yarn?
2 . How do they help you?
Say that in the next activity they will experience one of the ways of article discussion.

Exercise 4Match the words and their definitions

TEST

Put correct prepositions from the text.

1. Twisting fibers ….yarn… the process called spinning

a) in / in
b) on /in
c) into/ in
d) for/ in

2. Yarns ….up of a number of plies,
a) made
b) are made
c) is made
d**)** was made

3…… is a natural filament, and synthetic filament yarns are used to produce silk-like effects.

a) silk
b) fiber
c) material
d**)** rubber

Exercise 5.Translate into your native language

1.Spinning is an ancient textile art in which plant, animal or syntheticfibers are twisted together to form yarn.
2. Hand-spinning remains a popular handicraft.
3. In the most primitive type of spinning, tufts of animal hair or plant fiber are rolled down the thigh with the hand.
4. Later, the fiber is fastened to a stone which is twirled round until the yarn is sufficiently twisted.
5.Another bunch of fibers is drawn out, the spindle is given another twirl, the yarn is wound on the spindle, and so on.

☝Exercise 6. Translate into your native language
1. Spun yarns may contain a single type of fiber, or be a blend of various types
2.Silk is a natural filament, and synthetic filament yarns are used to produce silk-like effects.
3 For a single ply, the direction of the final twist is the same as its original twist.
4. The most widely used blends are cotton-polyester and wool-acrylic fiber blends
5. Filament yarn consists of filament fibers (very long continuous fibers) either twisted or only grouped together

✍Exercise 7.Look at the picture and find the names of these tools

Listening task

1.Listen to the text and correct the mistakes in the sentences.

1.Those activities tightened bonds after makers and made them share much more than a skill with each other

2. Everything was made with a hands and soul in it, therefore with exceptional quality and purpose to last as long as possible**.**

3. Everything was made with a heart and soul in it, therefore with difficult quality and purpose to last as long as possible.

4. Not only post-graduated waste, but also pre-consumer waste and production waste started to grow in uncontrollable amounts.

2.Listen to the text and unjumble the words

1	portingsup	
2	riencesexpe	
3	tionalexcep	
4	alquity	
5	ducprotion	
6	stewa	

Unit 5 Lesson3 **SPINNING MACHINE LOOMS**

Exercise 1. Write Uzbek(Russian) equivalents of these words and make up your own sentences.

Spinnig loom
called heddles
determines
shuttle looms
natural fibers
widely used
filament common
expensive filament
speeds the harnesses

Exercise 2. Read and translate the text

The huge components of the loom are the warp beam, heddles, harnesses, shuttle, reed and takeup roll. In the loom, yarn processing includes shedding, picking, battening and taking-up operations.*Shedding*. Shedding is the raising of the warp yarns to form a loop through which the filling yarn, carried by the shuttle, can be inserted. The shed is the vertical space between the raised and unraised warp yarns. On the modern loom, simple and intricate shedding operations are performed automatically by the heddle or heald frame, also known as a harness. This is a rectangular frame to which a series of wires, called heddles or healds, are attached. The yarns are passed through the eye holes of the heddles, which hang vertically from the harnesses. The weave pattern determines which harness controls which warp yarns, and the number of harnesses used depends on the complexity of the weave. Two common methods of controlling the heddles are dobbies and a Jacquard Head.

Picking. As the harnesses raise the heddles or healds, which raise the warp yarns, the shed is created. The filling yarn is inserted through the shed by a small carrier device called a shuttle. The shuttle is normally pointed at each end to allow passage through the shed. In a traditional shuttle loom, the filling yarn is wound onto a quill, which in turn is mounted in the shuttle. The filling yarn emerges through a hole in the shuttle as it moves across the loom. A single crossing of the shuttle from one side of the loom to the other is known as a pick. As the shuttle moves back and forth across the shed, it weaves an edge, or selvage, on e-ach side of the fabric to prevent the fabric from raveling.

***Battening*.** As the shuttle moves across the loom laying down the fill yarn, it also passes through openings in another frame called a reed (which resembles a comb). With each picking operation picking operation, the reed presses or battens each filling yarn against the portion of the fabric that has already been formed. The point where the fabric is formed is called the fell. Conventional shuttle looms can operate at speeds of about 150 to 160 picks per minute.

We are buying and selling selectively searched and good running condition looms only. Our product range for the weaving industry is extensive and covers all fields from basic weaving to Jacquard machines, Terry towel weaving and weaving preparation. We offer an extensive range of weaving machines and accessories covering all fields of textile production. We provide looms with cam motions and dobby. Depending on the type of machine, mechanical or electronic dobbies are available with us. Our supplied weaving machines are suitable for all types of fabric production, from basic fabrics to jacquard fabrics.

Rapier spinning machine P1

Unsurpassed flexibility paired with Customised SolutionsFollowing the motto "Customised Solutions", DORNIER's new rapier spinning machine P1 demonstrates the known sturdy machine construction with high reed impact forces, 5-axis control for multi-beam spinning of filament fabrics as well as very heavy multilayer conveyor belt fabrics

POST-TEXT EXERCISES

✍Exercise 3 Make up your own sentences with the following words

heddles or healds , warp yarns, the shed is created, shed by a small carrier, device, through the shed, traditional shuttle loom, the filling yarn , a hole in the ,single crossing , it weaves an edge, or selvage,

☝Exercise 4. Read the text check your predictions

Exercise 5. Answer the following questions

1. What is the importance of Spinning machine?

2.What is the roles of spinning looms?

3. What kind of spinning looms do you know?

4. Can you work on the spinning machines?

Listening task

1.Listen again to the text and decide which statement is True,False or Not Given.

1. As Bauman puts it "Time is indeed passing, and the trick is to make pace with it.

2. If you don't want to drown, you must keep on surfing: that is to say, keep changing, as often as you can, your wardrobe, furniture, appearance and habits, in short - yourself.

3. Combined together with the mindset of nowadays where "the function of

customs is not to satisfy existing needs

4.Everyone needs to change constantly.

5. Garments go through systems that are invisible to consumers and lack of value and appreciation due to it.

2.Listen to the text and fill in the gaps

Combined _____ with the mindset of nowadays where "the_____

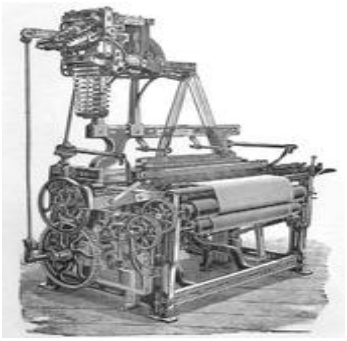
culture is not to _____ existing needs but _____ new ones -while simultaneously_____ needs already entrenched or_____ unfulfilled" we have achieved _____ industry proud of low quality cheap disposable

_____. Everyone needs to change _____. As Bauman puts it “Time is indeed passing, and the trick _____ pace with it.

Unit 6 Lesson 1WEAVING MACHINES

Exercise 1. Write Uzbek(Russian) equivalents of these words and make up your own sentences.

weaving machines	flexible
gentle material	extreme
pattern	diversity
reliable	functiona
security	expects
productivity	requirements.



Exercise 2. Read and translate the text
Weaving machines

Edmund Cartwright patented a power loom in 1785. This used water as power instead of human power which sped up the weaving process. Weavers were able to use all the thread that spinners could produce.[1] It was to be forty years before his ideas were modified into a reliable automatic loom. Cartwright was not the first man to design an automatic loom, this had been done in 1678 by M. de Gennes in Paris, and again by Vaucanson In 1745, but these never developed and were forgotten. Those designs preceded John Kay's invention of the flying shuttle and they passed the shuttle through the shed using levers.It was not a commercially successful machine. His ideas were licensed first by Grimshaw, of Manchester who built a small steam-powered weaving factory in Manchester in 1790. The looms had to be stopped to dress the warp, but the factory burnt down before anything could be learned.

The demands placed on weaving machines by the textile industry are manifold: Flexible and gentle material usage, extreme pattern diversity, an absolutely reliable functional security and fabrics without faults. Apart from that, the industry expects

that standstill times are as low and productivity is as high as possible. The unique DORNIER system family comprising rapier and air-jet weaving machines results from this catalog of market requirements.

Efficient operation thanks to identical electronics

Both types, rapier as well as air-jet weaving machines, are built on a platform strategy and use the same robust machine frame and electronic control systems. This means - despite different insertion systems - they can be operated and maintained in the same way, which is efficient and cost-effective. A further advantage: Simple accessory exchange and extensive use of identical spare parts reduce warehouse stocks at the customer's premises and therefore save money. New applications are designed in order to be always compatible with both systems.
Energy efficiency, raw materials and material efficiency belong to the important economical and ecological challenges for the international textile industry. New innovations on the air-jet weaving machine A1 have improved the sustainability and therefore made fabric production processes more efficient and more compatible for the environment

Air-jet weaving machine for tirecord

For fast, efficient tirecord fabric production Manufacturing tirecord for automobile and airplane tires demands weaving machines that can process large quantities of yarn reliably and precisely in short periods. The DORNIER air-jet weaving machine for tire cord fulfills these demands perfectly through high flexibility and performance ability.

Weave and Stitch in one Process

The development of the innovative Open Reed Weave (ORW) technology by DORNIER has created the foundation for integrating completely new functions into the weaving process.

Air-jet Terry weaving machine ServoTerry®

In the terry sector, DORNIER offers its newly developed air-jet terry weaving machine, type ServoTerry® , with a wide application range in terry fabric production such as hand and bath towels or materials for leisure, sport and beachwear.

Air-jet weaving machine EasyLeno®

The new DORNIER patented EasyLeno® leno technology serves as an important innovation for rapier and air-jet weaving machines for the sectors carpet backings, glass leno and curtains.

POST-TEXT EXERCISES

✍Exercise 3 ☺☺☺ Put participants in groups of 3 and invite them to compare their answers

🗝 **Exercise 4. TEST:**

1. **Choose the appropriate prepositions**
The warp threads run lengthways....the piece… cloth,

a) of/ of b)of/on c) for/of d) by/for

2. The ancient art …handweaving,… …. hand spinning.

a) on/of b) of/ along/ with c) of/with/ along d) in/on/by.

3. The majority ….commercial fabrics …the West.

a) of/ in b)in/in c)for/by d)with/ on

4.Complete the sentences.
The warp threads run lengthways…..

a) all of their fabrics,
b) ancient art of handweaving
c) of the piece of cloth
d) complexity of the design

5. Weaving is the textile art in which two….

a) distinct sets of yarns or threads
b) ancient art
c) art of handweaving
d) complexity of the design

LISTENING TASK

1.Listen to the text and unjumble the words

1	deevince	
2	tilestex	
3	ainsexpl	
4	dustinrial	
5	monlycom	

6	unesfort	

2.Listen to the text and complete the sentences below.

1. The time and effort needed for the production, collecting, and processing of raw materials throughout most of human history

2. In Nordic regions, for example, old fabrics were stuffed into walls to help guard against the cold

3. But as more efficient production took hold, textiles began to lose their high value.

4. The time and effort needed for the production, collecting, and processing

Unit 6 Lesson 2 WEAVING MACHINE LOOMS.

✍Exercise 1. Write Uzbek(Russian) equivalents of these words and make up your own sentences.

weaving machine looms	portable
operate	compact,
table looms	diversity
reliable	functiona
floor looms	expects
productivity	enjoyment

🗣Exercise 2. Read and translate the text

Text. **Weaving machine Looms.**

Kinds of looms. There are two basic types of looms, hand looms and power looms. A hand loom is any loom that is not power driven, such as a table loom or a floor loom.

A table loom is a compact, portable device that stands on a table or some other flat surface. Table looms of various sizes can weave cloth that measures from 8 to 36 inches (20 to 91 centimeters) wide. Table looms generally have from 2 to 8 harnesses, which the weaver controls by raising and lowering levers by hand. A table loom threads easily and costs less than most other kinds of looms. But weaving on a hand loom cab be tiring because the weaver must put down the shuttle and operate the harnesses manually after every row.

Floor looms are large and stationary and measure from 20 inches (51 centimeters) to 5 feet (1.5 meters) wide. The weaver raises and lowers the harnesses of a action frees the weaver's hands to pass the shuttle rhythmically through the sheds. Such rhythm adds speed and enjoyment to the weaving process.

Power looms produce millions of yards of textiles on factory assembly lines yearly. Looms rub by stream, electricity or water power have shuttles that refill automatically and can move as fast as 60 miles (97 kilometers) an hour. The beaters and harnesses on power looms move faster than the eye can follow.

How a loom works. Almost all looms have the same basic features and weave fabric in much the same way. On most looms, cloth is woven on a metal or wooden frame located at the front of the loom and parallel to the floor.

The weaver must thread the loom before weaving. A set of warp threads is wound onto a cylinder called the warp beam at the back of the loom. Each warp thread is then passed through one of two or more vertical frames called harnesses. The number of harnesses depends n the complexity of the weave. In the harnesses, each warp is threaded through a narrow opening in one of many strings or wires called heddles. The heddles hold the individual threads in place a prevent them from tangling. The warp threads then stretch over the weaving frame.

Next, the weaver winds the weft thread around a spool called the bobbin. The bobbin is held in an oblong metal or wood container called the shuttle. The shuttles serves as a needle that draws the weft thread over and under the warp. The weaving process begins when the weaver lifts the harness that holds are odd-numbered threads. This action creates a space called the shed through which the shuttle and weft then pass. Finally, the weaver lowers the first harness and pushes the newly woven row into place with a device called the beater or reed. The beater is in a frame located in front of, and parallel to, the harnesses. It has comblike "teeth" made of steel wires that push each weft row compactly into place to fighten the weave.

To weave the next row, the weaver raises the second harness and passes the shuttle through the shed. The weaving of each row involves the same process. The finished cloth is wound around a bar called the apron beam, or cloth beam, at the front of the loom.

POST-TEXT EXERCISES

Exercise 3 Decide whether the following statements are true or false according to the text

1. There are two basic types of looms, hand looms and power looms. 2. Almost all looms have the diffeent basic features and weave fabric in much the same way 3. The weaver must thread the loom before weaving 4. Floor looms are large and stationary and measure from 100 inches (57 centimeters) to 10 feet (1.5 meters) wide 5. Table looms generally have from 2 to 8 harnesses, which the weaver controls by raising and lowering levers by hand 6. The spinning of each row involves the same process	**false**	**true**

☝Exercise 4. Quyidagi so'zlarga sinonim tanlang.

A) invented, hardly, anchored,deficiency,discovery,brave,sullen,astonished.

B) attached, gloomyshortage,made up,surprised, feaeless ,treason, barely.

✍Exercise 5 Translate into your native language

1. There are two basic types of looms, hand looms and power looms.2. Power looms produce millions of yards of textiles on factory assembly lines yearly.3. On most looms, cloth is woven on a metal or wooden frame located at the front of the loom and parallel to the floor. 4. The weaving process begins when the weaver lifts the harness that holds are odd-numbered threads e shuttles serves as a needle that draws the weft thread over and under the warp..

🗝Exercise 6.

TEST

1. **Choose the appropriate prepositions**

The warp threads run lengthways....the piece… cloth,

a) of/ of b)of/on c) for/of d) by/for

2. The ancient art …handweaving,… …. hand spinning.

a) on/of b) of/ along/ with c) of/with/ along d) in/on/by.

3. The majority ….commercial fabrics …the West.

a) of/ in b)in/in c)for/by d)with/ on

4.Complete the sentences.
The warp threads run lengthways…..

a) all of their fabrics,
b) ancient art of handweaving
c) of the piece of cloth
d) complexity of the design

5. Weaving is the textile art in which two….

a) distinct sets of yarns or threads
b) ancient art
c) art of handweaving
d) complexity of the design

LISTENING TASK

1.Listen to the text and circle the right answer.

1. Application used to be the force demanding …….innovation.

a) smart b) level c) material d)sewing

2.Development in the smart ……area is mainly driven by material sciences, new opportunities in fiber level.

a) textiles b) force c) valuable. d)fabric

1. But not everything technologically ……is necessarily valuable.

a) textile b) material c) weaving d) possible

4. The ability to transcend the physical through myths and the ……in the making and use of craft artifacts.

a) fabric b) slowness c)) valuable d) everything

Listen again to the text and decide which statement is True,False or Not Given.

1. Now we are strongly driven by the new technologies – something is possible and that might be the problem!

2. Development in the smart textiles area is mainly driven by material sciences, new opportunities in fiber level.

3. Creating something technologically very challenging and fancy has no value if somebody needs it .

4.This partially explains why few extant examples of commonly used pre-industrial fabrics exist today.

Unit 6 Lesson 3

UZBEK TRADITIONAL CLOTHING

Exercise 1. Listen to the text. Write out the new words given below into your dictionary and make up short situation with them.

located cultural
exchangepeculiarity
attributes attention
urban garments
yashmak purpose

vertical cut horizontal shoulder

The Republic of Uzbekistanis located in the heart of Central Asia on the historic Great Silk Road, the crossroads of trade and cultural exchange between East and West. As a result, Uzbekistan has accumulated a very rich heritage and unique cultural continuity that dates back through many thousands of years of history. The culture of Uzbekistan is characterized by its inimitable national music, dance and painting, and unique national cuisine and clothes. The peculiarity of clothes and their design is determined by various factors, such as age, social position, and gender. Clothes are further classified by their use: casual (everyday wear), ceremonial, religious, and work clothes. Traditional Uzbek clothing has also developed according to climatic characteristics, as well as historical and ethnic-regional features. That is why the dress attributes in all regions of Uzbekistan are quite different from each other ."Clothes make the man", as the saying goes. While meeting people, it is indeed their clothes we pay attention to in the first place. If a person is dressed tastefully, it certainly makes a good impression on anyone around. And it is well-known that first impressions are the strongest. So everyone wants to dress beautifully, and it was like this at all times. Uzbek national clothes are very bright, beautiful and cozy. Uzbek clothes are a part of rich cultural traditions and life style of Uzbek people. In urban places it is uncommon to meet people in traditional Uzbek clothes, now it is mostly worn on traditional festivities and holidays. In rural places it is a part of everyday and holiday garments. Even oriental women, who used

to be secluded from public view, tried to decorate their yashmaks - though the purpose of yashmak was to conceal woman's appearance. The general evolution of oriental dress inevitably affected Uzbek national dress, though some of its distinctive and unique features have been preserved. Of course, modern caftan looks quite different from what it was, say, a hundred years ago. In the West the word caftan has been known since the Mongolian invasion and was borrowed by several languages. The traditional shirt (kuilak) was the everyday men's wear. First its length went beyond the knees, later it was shortened to reach only the middle of the thigh. This shirt had two types of collar: one was sewn to the edge of a vertical cut; the other was the border of just a horizontal shoulder-level cut. The male residents of Tashkent and Ferghana regions wore the loose kimono-like shirt "yakhtak". It was made from cotton fabric and was worn by both the young and the elderly. Sometimes the collar was bordered by a decorative tape jiyak. One of the plainest garments of men's wear was the trousers" ishton". They had no pockets, slits and buttons; they narrowed towards the bottom and reached the ankles.

Exercise 2. Complete the sentences.

1.The peculiarity of clothes and their design is determined by various factors, ….
2…. Uzbekistan are quite different from each other.3. Uzbek clothes are a part of rich …..4. …..it is a part of everyday and holiday garments.5. The general evolution of oriental dress inevitably affected Uzbek national dress, ….6. The traditional shirt (kuilak) …..

Exercise 3.Translate into your native language.

1. "Clothes make the man", as the saying goes.2. Traditional Uzbek clothing has also developed according to climatic characteristics, as well as historical and ethnic-regional features.3. . Uzbek clothes are a part of rich cultural traditions and life style of Uzbek people.4. The male residents of Tashkent and Ferghana regions wore the loose kimono-like shirt "yakhtak". 5. . Sometimes the collar was bordered by a decorative tape jiyak.

Exercise 4. Open the brackets using the correct form of the verbs..

1. The peculiarity of clothes and their design (to determine) by various factors, such as age, social position, and gender.2. If a person(to dress) tastefully, it

certainly makes a good impression on anyone around.3. . Even oriental women, who (to use) to be secluded from public view, tried to decorate their yashmaks - though the purpose of yashmak was to conceal woman's appearance.4. The male residents of Tashkent and Ferghana regions (to wear) the loose kimono-like shirt “yakhtak”.5 . Sometimes the collar (to border) by a decorative tape jiyak.

✍Exercise 5. Unscramble the letters and write out the correct words
avuarios, signde, rentdiffe,ssionimpre, ddmile, irtsh, ioregns, ttonbu

✍Exercise 6.Decide whether the following statesments are True or False according to the text.

1.As a result, Uzbekistan has accumulated a very rich clothes and unique cultural continuity that dates back through many thousands of years of history.2."Clothes make the man", as the saying goes.3. If a person is not dressed tastefully, it certainly makes a good impression on anyone around.4. And it is well-known that first impressions are the strongest.5. The male residents of Samarkand and Bukhara regions wore the loose kimono-like shirt “yakhtak”.6. One of the plainest garments of men's wear was the trousers” ishton”.

LISTENING TASK

1.Listen to the text and fill in the blanks.

Whether or not the 1_____ was produced in the _2_____is inconclusive; texts __3_____the houses imply that it was, but ___4___ are almost absent from the __5_____faunal remains from the__6_____ and wool is not attested ____7_____ the commodities listed in the _____8 Agricultural Account Book

2.Listen to the text and match the words

1	both natural ….	**A** absent from the faunal
2	Whether or not the ……	**B** due to the nature
3	but sheep are almost …..	**C** and dyed
4	The latter may well be….	**D** sufficient sheep
5	but whether there were …..	**E** wool was produced

UNIT 6 LESSON 4 WOMEN'S TRADITIONAL CLOTHING

Exercise 1. Listen to the text. Write out the new words given below into your dictionary and make up short situation with them.

necklines
married
robes
regular part
waist
headdresses
embroidery
include
elbows.
sleeves
major component
wealthy

Traditionally, women wore a tunic-like dress, the *kuilak*(dress), and baggy trousers called *lozim.* The necklines of dresses made for unmarried girls were tailored differently than those for married women, and married women without children usually wore a stand-up collar that was edged withpleating. In the Bukhara and Samarkand oases, women's collars were edged with *keshkurt,* a tape made with gold embroidery.For festivals or parties,women often wore three different dresses at one time. The sleeves of each dress were of different lengths, so that the hems of the bottom sleeves, each beautifully embroidered,peeked out beneath the overlying sleeves. The women strove to outdo one another with the luxuriousness of their clothes, often taking up to seven dresses with them and changing their attire throughout the course of an event. Outer clothing for women included quilted tunic robes. The quilted robes of Khorezm women were particularly interesting, featuring a horizontal slit on the sleeves at the elbows. Women of Bukhara and Samarkand wore long, light robes called *rumcha,* which were tapered at the waist. *Rumchas*had short sleeves and embroidered necks. *Munisak*robes (also known as *kaltacha*) were lined and, if for winter usage, had a thin insulating layer. They were a regular part of a woman's attire on festival days.
Later, another type of clothing appeared: the *kamzul*or*peshmat*(camisole). This robe also tapered slightly at the waist, had short narrow sleeves, a turned-down collar, and side or breast pockets. Usually *peshmats*were sewn from brightly striped *bekasam*or

colored velvet. At about the same time, short sleeveless jackets, or *nimcha*, became popular. Headdresses were also a major component of women's clothing. The traditional headdress for women was a square kerchief called the *rumol,* which was tied around the head. Wealthy women wore kerchiefs interwoven with gold or silver spangles. When a woman was working, she covered
her head with a white muslin kerchief, the *doka*(gauze), which was rarely embroidered. Girls and young women wore skullcaps called *doppi.*
Young women also decorated their heads with jewelry. The *tillakosh*(well-known in Bukhara, Tashkent and Ferghana) was a delicate, gilded diadem. It usually had a bead in front surrounded by tiny turquoise stones as an amulet against the evil eye.


Exercise 2.Decide whether the following statesments are True or False according to the text.

1. In the Bukhara and Samarkand oases, women's collars were edged with *keshkurt,2. Robes* had short sleeves and embroidered necks. *Munisak*robes.3. The sleeves of each dress were the same length.4. Outer clothing for women included quilted tunic robes. 5. They were a regular part of a woman's attire on festival days.6. The traditional headdress for women was a square kerchief called the dress, which was tied around the head.7. Wealthy women wore kerchiefs interwoven with gold or silver spangles. 8.Girls and young women wore skullcaps called *doppi.*

Exercise 3.Translate into your native language.

1 The traditional headdress for women was a square kerchief called the *rumol*, which was tied around the head.**.2.** For festivals or parties,women often wore three different dresses at one time.3 Outer clothing for women included quilted tunic robes.4. The quilted robes of Khorezm women were particularly interesting, featuring a horizontal slit on the sleeves at the elbows.5. Wealthy women wore kerchiefs interwoven with gold or silver spangles.

Exercise 4. Unscramble the letters and write out the correct words

menwo, enildchr, reargul, rownar, addrheess, nglo, vesilr, eahd

Exercise 5. Put correct words

1.. In the Bukhara and Samarkand oases, women's collars ….. edged with *keshkurt.*
2. Women of Bukhara and Samarkand wore long, …. robes called *rumcha.3.*

*Rumchas*had short …… and embroidered necks.4. Later, another type of clothing ……: the *kamzul*or*peshmat. 5.* When a woman was working, she …..her head with a white muslin kerchief, the *doka*(gauze), which was rarely embroidered.6. It usually had a bead in ….. surrounded by tiny turquoise stones as an amulet against the evil eye.

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