Class 14.

I. Grammar training

Task 1. Put the verb given in brackets into the correct form (active or passive).

1) New species (form) from pre-existing ones. 2) The most suitable organisms (survive) in the environment. 3) Theory on the mechanism of evolution (develop) by Charles Darwin and Alfred Wallace in the middle of the 19th century. 4) New findings (present) to the Linnaean Society in 1858. 5) Offspring (produce) by all animals. 6) Survival of the great numbers of progeny (lead) to geometric increase in the size of any population. 7) Any organism (try) to resist the negative factors of the environment. 8) New species (breed) by the scientists last decade. 9) Various factors (affect) the health of the population. 10) A new property (acquire) by these organisms. 11) All living things (produce) progeny.

Task 2. Make questions to the word /words highlighted in bold type.

1) Constant numbers of progeny are maintained by most populations. 2) Constant numbers of progeny are maintained for the survival. 3) The better characteristics are acquired by the organisms in the struggle for existence. 4) The better characteristics are acquired by the organisms in the struggle for existence. 5) The better characteristics are acquired by the organisms in the struggle for existence. 6) The classes in Chemistry were attended by these students last week. 7) The classes in Chemistry were attended by these students last week. 7) The classes in Chemistry were attended by the exams successfully. 9) Many assignments are done by this student every week to pass the exams successfully. 10) Many assignments are done by this student every week to pass the exams successfully.

Task 3. Work in pairs. Ask questions in Simple Passive with the following word combinations in the tense form given in brackets. Answer the questions in the same tense.

Eg. - to pass the Unified State Exams with the highest grades (Past Simple)

S1 – Were the Unified state exams passed successfully?

S2 - No, the Unified state exams passed with average grades (or -Yes, they were passed with the top grades)

To choose an educational establishment (Past S.), to submit documents (Past S.), to rank among the best applicants (Past S.), to attend all lectures and seminars (Present S.), to do home assignments on my own (Present S), to pass credit tests and exams in a month (Future S.), to acquire skills in practical training (Future S.)

II. Informative reading

Task 4. Read the text about the scientists contributed to the discovery of DNA. Complete the table of comparison.

Names of the researchers	What was found out	Drawbacks of the research (Why did they fail?)

Task 5. While reading, find the English equivalents to the following words and word combinations - точный, методика, сворачиваться кольцом, данные, подход, настоящий (реальный), соответствовать, выявлять, правило пар оснований, решение.

The Discovery of the Double Helix

In the early 1950s, many biologists realized that the key to understanding inheritance lay in the structure of DNA. They also knew that the first to find the correct structure of DNA would receive great respect from fellow biologists, fame in the popular press, and very possibly the Nobel Prize.

Linus Pauling of Caltech was the first among the perspective candidates to discover the structure of DNA. Pauling probably knew more about the chemistry of large organic molecules than any person did. He realized that accurate models could help in understanding of the molecular structure. Like Rosalind Franklin and Maurice Wilkins, Pauling was an expert in X-ray diffraction techniques. In 1950s, he showed that many proteins were coiled into single-stranded helices. But Pauling wasted much time. First, for years he had concentrated on protein research, and therefore he had little data about DNA. Second, he was active in the peace movement, so much time was spent in demonstrations and debates.

The second competitors for the Nobel Prize were Wilkins and Franklin, the English scientists who planned to determine the structure of DNA by the most direct procedure, namely by the careful study of the X-ray diffraction of DNA. They were the only scientists who had very good data about the general shape of the DNA molecule. Unfortunately for them, their methodical approach was time-taking and the research progressed too slowly.

The door was open for the actual discoverers of the double helix, James Watson and Francis Crick - two young scientists, first of them was an American and the second - an English one. Watson and Crick did no experiments in the ordinary sense of the word; they spent their time thinking about DNA, trying to construct a molecular model that fit the data. Finally they achieved their aim, they revealed the base-pairing rule that was the key to DNA structure. When Pauling was told about the work of these scientists, he (being a great person) congratulated Watson and Crick on their brilliant solution of the problem of the DNA structure. They were awarded a Nobel Prize.