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USE OF INNOVATIVE TECHNOLOGIES IN THE CONCEPT OF NUCLEIC ACIDS, WHICH ARE THE BASIS OF LIFE SUSTAINABILITY

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Annotation
At a time of rapid development of science and technology, a sharp increase in information, the application of new innovative technologies in the educational process serves to increase the effectiveness of the lesson. Appropriate use of technology in the coverage of the topic helps to make the lesson interesting and to achieve pedagogical goals.

Keywords: Technology, innovation, nucleic acid, adenosine di phosphate, ATF, gene pool or genetic code, photosynthesis, ecology, life cycle, Chargaff's rule, hydrolysis, DNA and RNA.

Introduction

XX I century is the age of intelligence, spirituality and knowledge. That is why this century requires radical changes in the socio-economic, spiritual and educational development of society. These radical changes are primarily aimed at educating young people so that they become a harmoniously developed generation. As the First President I.Karimov said: "The future of our country depends on how our young generation is brought up, what spiritual qualities they grow up, how active our children are in life, what high goals they serve . " Therefore, the tasks provided for in the Law " On Education " are being implemented gradually. These are:
The education system and content have been updated;
State education standards have been developed and are being implemented for the updated continuing education system;
Education management is being reformed;
The monitoring of the requirements for the spiritual and moral potential of the intellectual abilities of students is being carried out.

Discussion and Results

Mechanisms for adapting education to a market economy are being established. These innovations, in turn, required a new approach to the planning of the teaching process, a new approach to the design of lessons, a new organization of the educational

process. Accordingly, there is a need to "increase the efficiency of scientific and technological research, launch new research and put it into production." In this context, it is absolutely incorrect to limit the creative activity of the teacher, making him the object of education, while appointing only the teacher as the organizer, implementer and supervisor of the learning process. Especially in an era of rapid development of science and technology, a sharp increase in information, it will be possible to achieve this through the use of new innovative technologies in the educational process.

The teacher gives an idea that nucleic acids are one of the most important organic compounds in the development of living organisms. They are high molecular weight compounds with a certain elemental content. When hydrolyzed, purine and pyrimidine are broken down into nitrogen bases, pentose carbohydrates, and phosphoric acid residues. The basis of the composition of the elements is S, N, O, R, of which phosphorus is 8-10%, nitrogen is 15-16%.

Nucleic acids were first invented in 1869 by the Swiss scientist F. Misher. Because these acids are isolated from the cell nucleus (nucleus-nucleus), they are called nucleic acids. By the end of the 19th century, Altman had isolated it from animal tissues. In 1936, the Russian scientist Belozersky, with the help of his students, isolated the plant. Nucleic acids are divided into 2 types, namely DNA and RNA. In DNA, zoxyribose contains a carbon component, while RNA contains ribose. Nucleic acids are involved in the transmission of hereditary traits from generation to generation. They are often found in the stems and leaves, seeds, which grow mainly in the plant organism. For example, 4.6-6.2% in poppy seeds, 7.4% in wheat grains, 2.6-3.2% in cotton seeds, and 0.1-1% in stems and leaves. determined in quantities. In the separation of nucleic acids, it is necessary to break the bond between the nucleic acid and the protein. This is done by heating plant or animal tissue in a water bath for one hour using a strong solution of salt i.e. 10% NaCl. One of the most widely used methods today is the fezero method. This method is based on the precipitation of proteins by naturalization. Proteins precipitate with the f e zero part, while nucleic acids pass into the aqueous part. The nucleic acids are then precipitated using alcohol. Nucleic acids are broken down into structural units when heated using hydrochloric acid. They consist of purine and pyrimidine nitrogen bases, carbon and hydrogen components ribose and deoxyribose , and phosphoric acid residues. Basics of purine nitrogen. Nucleic acids contain two types of purinazole bases, namely adenine and guamine. The formula of purine nitrogen base is written as follows.

The purinease base is composed of pyrimidine and imidazole rings. In the adenine molecule, the 6-hydrocarbon atom is replaced by the NH 2 group , and in the guanine,

the hydrogen at the 4-carbon atom is replaced by the amine group (NH 2) and the 6-hydroxy (ON) group at the carbon atom. Adenine is also known as the 6-amino purine and guanine is also known as the 4-amino 6-oxypurine. Pyrimidine nitrogen bases. Nitrogen bases of pyrimidine are derivatives of pyrimidine g e t e ro - cyclic compound. Its molecular weight consists of 4 atoms of carbon, two atoms of nitrogen and four atoms of hydrogen.

Similar forms can be observed in purine bases. That is why they are called minor bases.

The nitrogen base of cytosine is in DNA and RNA, uracil is in RNA only, and thymine is in DNA. The carbohydrate component of nucleic acids. Nucleic acids include 2 carbohydrate components ribose and deoxyribose. The structure of both components has the shape of a furan.

The 2-carbon in the deoxyribose molecule is returned by the N bond instead of the ON group attached to the atom. Ribose and deoxyribose are not the only carbohydrates found in nucleic acids; small amounts of glucose were also found in some.

The composition of the hydrolysis product of nucleic acids varies depending on the source obtained. For example in the calf separated from the thyroid gland (thymus) nucleic acid (thymonucleic acid), yeast separated nucleic acid (yeast) nucleic acid) difference presence identified, they structure, functions and structure with differentiated. One is called deoxyribonucleic acid (DNA) and the other is called ribonucleic acid (RNA).

Molecular weight of nucleic acids. Nucleic acids are high molecular weight compounds, and their molecular weight varies in size depending on the type. The DNA molecule has the highest molecular weight. The DNA molecule weight of some viruses is several tens of millions of units, for example, the molecular weight of the DNA of bacteria reaches 120 million.

DNA isolated from plant, microorganism, and animal cells have different molecular weights. For example, the molecular weight of DNA isolated from a calf's thyroid gland ranges from 6 million to 36 million. Some of scientists according to DNA molecules per 500,000 units has from sub units formed finds. He said that DNA, which has 20-30 million units, should support the body's biological functions expectations there is. The molecular weight of DNA in a bacterial cell is estimated at 1 billion. It is no exaggeration to say that the molecular weight of RNA never approaches the molecular weight of DNA. Depending on their molecular weight, RNAs are divided into 2 groups, low molecular weight and high molecular weight RNA. These 2 different RNAs are not only radically different from each other, but also have different functions in the body.

The teacher can use FSMU technology at the end of the lesson. Students are related to the topic which was final conclusion or idea offer is given;
FSMU technology to each student lines written papers are distributed.
F - Express your opinion.
Q - Give a reason for your statement.
M - Prove your reason.
He - summarize your thoughts.
Each student completes the four stages of the FSMU on individually distributed papers with a written statement of their independent judgment regarding the proposed conclusion or idea;
In the next stages, students are divided into small groups and each listener introduces the group members to the FSMU they have written;
Group members explore all the ideas, summarize them, and make their presentations;
All presentations are summarized by the teacher, detailed conclusions are formed and the training is completed. For example, FSMU can be conducted on topics such as "The product of hydrolysis of nucleic acids", "There are three types of high-molecular RNA", "DNA isolated from plant, microorganism and animal cells".
Instructions for using the BBB Technique
1. Fill in column 2 according to the lecture plan.
2. Think, solve in pairs, and answer, what do you know about these questions, complete column 3.
3. Think, solve in pairs, and answer what you need to know about these questions, complete column 4.
4. Listen to the lecture.
5. Fill in column 5.
BBB table (I know, I want to know, I know)

№	Subject matter	I know	I want to know	I knew
1	2	3	4	5
2				

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