

## IMPORTANCE OF BIOLOGY TODAY

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**Abstract.** *This article talks about today's perspectives and importance of biological science, its development.*

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When a person comes into the world, he lives in contact with the so-called nature. It will be closely connected with him. The science that surrounds this garden and teaches us is biology. Today, the attention to this subject has increased, and I am not mistaken in saying that it has risen to the level of a state program for the preparation of values with a thorough knowledge of this subject. Biology is a very interesting science because it is a science that tells us about ourselves, about the nature around us, about our tiny cells.

In the past, humanity faced common problems such as health care, food supply, and preservation of the diversity of organisms on our planet. Biology, whose research is aimed at solving these and other problems, could not worry about medicine, agriculture, industry, especially food, etc. Because mother nature has given all the blessings. However, the active and often ill-conceived economic activity of man has led to significant pollution of the environment with substances harmful to all living beings, destruction of forests, virgin steppes and reservoirs. Over the past centuries, thousands of species of animals, plants and fungi have become extinct, and tens of thousands of species are on the verge of extinction. But the extinction of a single species of organisms represents an irreversible loss for the biological diversity of our planet. Therefore, scientists compile a list (called Red Books) of plant, animal and mushroom species that need protection. Thus, biology is a science that, through its research, is called to convince people of the need to respect nature and obey its laws. Therefore, it is considered the science of the future.

The objects of investigation of biology are plants, animals, fungi, microorganisms and humans. Biology enters the system of natural sciences and is divided into the fields of botany, zoology, anatomy, physiology, cytology, systematics, paleontology. Biochemistry, biophysics, genetics, evolutionary theory, ecology, embryology, molecular biology, biogeocenology are also the sciences of the biological complex. An important feature of living organisms is that they have the property of metabolism. That is, the process of assimilation and dissimilation, which are integrally connected with each other.

It is understandable if we draw a parallel between the main problems of human life, for example, health, nutrition and the choice of optimal living conditions. Today, many important and independent sciences separated from biology are known. These include zoology, botany, microbiology and virology. It is difficult to single out the most important

of them, they all represent the most valuable set of fundamental knowledge accumulated by civilization. Claudius Galen, Hippocrates, Carl Linnaeus, Charles Darwin, Alexander Oparin, Ilya Mechnikov enriched the field of biology with clear evidence. Their discoveries, especially the study of living organisms, gave rise to the science of morphology, as well as the science of physiology, which includes knowledge about the systems of living organisms. Genetics played an invaluable role in the development of hereditary diseases. With the development of the science of genetics, several innovations were created in the history of mankind. You all know that when a person is sick, they take drugs. Many medicinal substances are obtained from plants or products of the vital activity of microorganisms. For example, the use of antibiotics (Greek anti - protve - and bios). They are produced by certain types of fungi and bacteria. Antibiotics kill the pathogens of many dangerous diseases of humans and animals. An important role in the field of biology is to provide food for mankind. Scientists are creating new high-yielding plant varieties and animal breeds that provide more nutrition. Biological research focused on maintaining and increasing soil fertility to ensure high yields. Living organisms are widely used and they are also used in industry. For example, a person gets yogurt, kefir, cheese due to the activity of certain types of bacteria and fungi. In baking, yeast fungi are widely used. Biology has become a solid foundation in medicine, sociology, and ecology. Importantly, this science is not static like other sciences, but is constantly filled with new knowledge and changes in the form of new biological theories and laws, but this is invaluable in medicine. It was with his help that methods of treating bacteriological and rapidly spreading viral diseases were found. Every time we think about the question of the role of biology in modern society, we remember that thanks to the heroism of medical biologists, terrible epidemics: cholera, typhus, and anthrax have disappeared from the planet Earth. smallpox, etc., there are many diseases that are dangerous for human life.

As mentioned above, while the science of biology studies living organisms, it is not limited to solving its theoretical knowledge, but it has practical significance, that is, at a time when the number of the world's population is increasing, it is necessary to provide them with food, clothing and other necessary things. aims to provide. Therefore, breeding of productive animal breeds, plant varieties, obtaining abundant harvests from plants, maintaining and increasing soil fertility, introducing crop rotation, combating diseases and pests, maintaining and increasing forestry, hunting and he set himself the goal of correcting the fur industry and other important problems. In biology, like in other sciences, there are many problems, issues waiting to be solved, mysteries of living nature. These problems are, firstly, to determine the structure and function of molecules: secondly, to know the regulatory mechanisms of the development of unicellular and multicellular organisms; thirdly, to clarify the mechanisms of heredity in individual development of organisms, i.e. differentiation from protein biosynthesis to cell formation; fourth, to determine the historical development of organisms; fifth, solving the problem of the origin of life on earth and proving it experimentally; sixth, to know the positive and negative

effects of people on nature; Seventhly, it is to solve some problems that are open with the emergence of man. Solving the above-mentioned problems is the main task of biological science. But the science of biology is not limited to solving theoretical problems, it also takes an active part in solving problems of very important practical importance.

The main importance of biology is that it serves as the foundation and theoretical basis for many promising sciences, such as genetic engineering and bionics. He has an amazing discovery - decoding the human genome. A field like biotechnology was created on the basis of combined knowledge in biology. Currently, it is this nature of technology that makes it possible to create safe drugs that do not harm the body for prevention and treatment. As a result, it is possible to increase not only the length of life, but also its quality. The science of bionics means creating new techniques based on biological factors. For example, for the first time, airplanes were created based on dragonflies, and cars based on beetles. The role of biology in modern society means that there are fields where its knowledge is simply necessary, for example, the pharmaceutical industry, gerontology, forensic medicine, agriculture, construction and space research. Today, it is difficult to imagine our life without the above directions.

In conclusion, biology is the science of living things, and I am not mistaken in saying that studying living things is both interesting and necessary for every person. It is not for nothing that this subject is taught from school age, because every person at least knows about his environment, lifestyle, about the need to make an intention to be healthy, about the events happening around him, at least it is necessary to have brief information.

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