

THE MULTIDIMENSIONAL NATURE OF KNOWLEDGE IN THE FIELD OF BIOLOGY AS A TOOL FOR THE REALIZATION OF EDUCATIONAL GOALS

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Abstract:

It is known that "Biology" is the science of living organisms, and as in any natural science, its postulates are formed on the basis of proven scientific data, denying any unproven phenomenon. Simply put, modern biology is based only on facts, losing its axiological value due to the technological revolution. At the same time, if we turn to the origin of the development of biology as a science, it is clear that initially the surrounding world was perceived through the senses, and it is known from psychology that sensations are formed on the basis of information received from receptors.

When a person perceives information through intuition, he forms his own vision of the world in his mind, and this is reflected in his behavior and actions in relation to the people around him and the external environment. If we turn biology into its sources of origin, it is possible to restore its moral, spiritual and educational role in the life of any person. The article describes ways to implement competence-based and educational goals in biology lessons in secondary and higher educational institutions.

Keywords: values, biology, morality, spirituality, competence, feelings, aesthetics.

МНОГОАСПЕКТНОСТЬ ЗНАНИЙ В ОБЛАСТИ БИОЛОГИИ, КАК ИНСТРУМЕНТ ДЛЯ РЕАЛИЗАЦИИ ВОСПИТАТЕЛЬНЫХ ЦЕЛЕЙ

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**BIOLOGIYA SOHASIDAGI BILIMLARNING KO'P QIRRALILIGI
TA'LIM MAQSADLARINI AMALGA OSHIRISH VOSITASI SIFATIDA**

Аннотация:

Ma'lumki, "Biologiya" tirik organizmlar haqidagi fandır va har qanday tabiiy fanda bo'lgani kabi, uning postulatları ham isbotlangan ilmiy ma'lumotlar asosida shakllantirilib, har qanday isbotlanmagan hodisani inkor etadi. Oddiy qilib aytganda, zamonaviy biologiya texnologik inqilob tufayli o'zining aksiologik qiymatini yo'qotgan holda faqat faktlarga asoslanadi. Shu bilan birga, biologiyaning fan sifatida rivojlanishining kelib chiqishiga murojaat qiladigan bo'lsak, dastlab tevarak-atrofdagi olam sezgilar orqali idrok etilganligi ayon bo'ladi hamda psixologiyadan ma'lumki, sezgilar retseptorlardan olingan ma'lumotlar asosida shakllanadi

Inson sezgi orqali axborotni idrok etar ekan, uning ongida dunyo haqidagi o'ziga xos tasavvurini shakllantiradi va bu uning atrofidagi odamlar va tashqi muhitga nisbatan xatti-harakatlari va harakatlarida namoyon bo'ladi. Biologiyani uning kelib chiqish manbalariga aylantirsak, uning har qanday inson hayotidagi axloqiy, ma'naviy va tarbiyaviy rolini qayta tiklash mumkin. Maqolada o'rta va oliy o'quv yurtlarida biologiya darslarida kompetensiyaga asoslangan va ta'lim maqsadlarini amalga oshirish yo'llari yoritilgan.

Kalit so'zlar: qadriyatlar, biologiya, axloq, ma'naviyat, kompetentsiya, hislar, estetika.

INTRODUCTION

Modern biology, being the basis of many areas of the technological industry, including medicine and pharmaceuticals, has lost its sensory, aesthetic and spiritual component in its development. Man uses the current achievements of biology mainly to solve socio-economic problems, sometimes sweeping aside human spirituality and morality. Yes, it is worth recognizing that today great strides have been made in preserving the ecological balance of nature, researching and using methods and methods for treating human and animal diseases, achievements of biotechnology and genetic engineering, etc. However, it should be recognized that the above problems are the consequences of the activities of man himself, and man, as a subject with internal contradictions, does not always



use the achievements of science for humane purposes. And this is where educators around the world face a big challenge.

Research Methods

How to present students with knowledge in the field of biology so that basic understanding and memorization of factors about living nature occurs in conjunction with the implementation of educational goals, including:

1. Formation and instillation of axiological and humanistic values. [5]
2. Development of not only natural science, but also humanitarian thinking.
3. Development of aesthetic perception of the surrounding world
4. Formation in students of the idea that man is not the “King of Nature,” but just one of its components, completely dependent on it.
5. Development of creative thinking, love of art and creativity.
6. Development of a psychological approach to training, with the goal of raising a mentally stable, balanced and self-sufficient person who will not be negatively affected by destructive ideas in the future.
7. Using health-saving technologies to understand and comprehend the value of someone else's life.
8. Fostering patriotism and, at the same time, national tolerance.
9. Formation of moral and ethical values, including love and respect for parents, loved ones and surrounding people.

Analyzes and results. As can be seen from the above, the methodology for teaching biology should not only develop ways and methods of effectively presenting information, but also at the same time take into account the fact that any student is not only a machine for memorizing facts, but also a subjective personality with his own psychological inner world and sensations.

At first glance, the implementation of so many educational goals at the same time seems simply impossible, but if you approach the development of activities creatively, work on yourself and with additional literature, the implementation of these goals will turn out to be quite possible.

As an example, illustrating the possibilities of realizing these goals in biology classes in both secondary and higher educational institutions, the topic: “Analyzers. Sense organs.” In world culture, various branches of science, art, religious movements, business and many other areas of human activity, the attitude towards the senses of people of various professions with non-biological



specialties is different. Below are examples of understanding the importance of the senses in various areas of human activity.

In cultural studies, information received by the human brain from the senses shapes a person's perception of the world around him and himself. Communication occurs through the senses. As a type of communication - oculusics. When speaking, speech acts occur not only verbally, but also using the language of the eyes. The main functions of oculus are cognitive, emotive, controlling, and regulatory. [1]

In psychology, the simplest mental process from which a person's knowledge of the world around him begins is sensation. Sensory sensations are what provide a person with material for complex psychological processes, such as imagination, perception, thinking, etc. [4]

In literature - the technique of immersion in the situation. [2]

A writer can appeal to five senses:

- to vision through the image of the color of an object;
- to hearing through the characteristics of sounds;
- to the sense of smell through the transfer of odors;
- to the sense of touch through the depiction of the characters' sensations from touching something;
- to taste through the description of taste properties.

In religion, the Bible constantly uses a variety of metaphors related to the senses. For example: light - darkness, visible - invisible, blind - sighted. "While the soul revolves on the earth, the body and bodily senses clothe it with countless chains... and hearing, and sight, and touch, and smell, and tongue bring into it from without a multitude of evils. But when it soars and indulges in the pursuit of spiritual objects, it blocks the entrance to sinful dreams, not closing off the senses, but directing their activity to the same height." [7]

In art - the use of allegories. For example, in Jacques Linard's still life "The Five Senses" there are no people or animals. The five senses are represented exclusively by objects. At first glance, the allegory seems simple: a mirror and a framed landscape symbolize vision, flowers in a golden jug symbolize smell, fruits symbolize taste, a music book symbolizes hearing, and a velvet purse, coins and cards represent the sense of touch. However, the deliberate artificiality of the composition suggests that behind the seemingly random accumulation of things lies a deeper meaning. [3]





Still life by Jacques Linard “The Five Senses”

Conclusions and Offers

As can be seen from the above examples, the senses of people of non-biological professions or creatively and spiritually developed people are perceived not anatomically or physiologically, but morally and spiritually. Even in psychology, the senses are projected onto the inner psychological world of a person, his conscious and subconscious activities.

Thus, it was clearly demonstrated that the transfer of knowledge in the field of biology should not be carried out purely from the point of view of presenting facts that confine one to a narrow framework of perception, but on the contrary, it should expand students' horizons and the limits of their understanding of the world around them. Therefore, when preparing and developing classes, the teacher will have to analyze literature in various scientific fields, self-educate and develop, after which at least some part of the class time should be devoted to interpreting new knowledge from the point of view of other sciences, culture, psychology, etc. As a result of applying this approach, it is also possible to



implement areas of STEAM technologies, form interdisciplinary and core competencies, create an environment for independent work with additional literature, etc. [6]

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