INTEGRATION OF PHILOLOGY AND SOCIAL SCIENCES IN TEACHING BIOLOGY

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https://doi.org/10.5281/zenodo.5895082

We define integration as the coordinated, holistic, interconnected activity of all professors aiming at the development of a student's comprehensively formed, creative personality. Integrated learning is one of the innovations of modern methodology. This technology boldly invades unshakable school programs and connects seemingly incompatible subjects. Biology is no exception. The school subject "Biology" is integrated. It is permeated with interdisciplinary connections and offers students knowledge of many areas of science, art, culture, as well as real everyday life.

Integration in education presupposes, first of all, a significant development and deepening of interdisciplinary connections, which are analogous to interscientific connections, a transition from harmonizing the teaching of different subjects to their deep interaction. Integration takes place in various directions at the same time: intrasubjectively, interdisciplinary, and intercycle; between two education systems: basic and additional; and in the system of educational work of classes and the entire lyceum. We believe that implementing integration in the lyceum - the coordination of principles, approaches, and methods of pedagogical activity among teachers - will result in a new level of educational quality. The learner will not be at the center of multidirectional, sometimes contradicting teaching impulses in such a system. Teachers' efforts are geared at assisting students in developing their knowledge and abilities. There are several types of integration, the most common of which are content and activity. We carry out the following tasks as part of content integration:

- formation of a unified conceptual apparatus of schoolchildren at various levels of education;
- extensive use of interdisciplinary connections in the study of academic disciplines;
- conducting integrated and binary lessons and extracurricular activities (including electives, class hours, and so on);
- development and introduction to the educational process of various integrated courses, electives; creation of author's subject educational programs;

The following tasks are completed as part of the activity integration:

- teachers from many academic fields using comparable coordinated current pedagogical technology, as well as individual ways and approaches, forms and methods of arranging the educational process;
- establishment of consistent requirements for various types of work and activities.

Integrated lessons develop the potential of the students themselves, encourage active knowledge of the surrounding reality, to comprehend and find cause-and-effect relationships, to develop logic, thinking, and communication skills. To a greater extent than usual, they contribute to the development of speech, the formation of the ability to compare, generalize, and draw conclusions. The form of conducting integrated lessons is non-standard, exciting. In addition, the use of various types of work maintains the attention of students at a high level, which allows us to talk about the developmental effectiveness of such lessons. They relieve fatigue, overstrain of students due to switching to various types of activities, sharply increase cognitive interest, serve to develop imagination, attention, thinking, speech and memory of schoolchildren.

The integrated lesson's characteristics are as follows:

1. The author's goal controls the entire lesson;

2. The key topic (the lesson's core) links the entire lesson together.
3. The lesson is a single whole, and the stages are shards of that whole.
4. The lesson's stages and components are connected in a logical and structured way;
5. The didactic material chosen for the lesson is in accordance with the lesson plan;
6. The information chain is arranged as "given" and "new," indicating both structural and semantic connectivity.

Moreover, integration provides an opportunity for self-realization, self-expression, creativity of the teacher, contributes to the disclosure of the abilities of his students.

Biology is a scientific field that can be applied to a variety of educational subjects. The teacher will be able to adequately present the object of study, gaining a deeper grasp of the phenomenon being researched, based on his or her knowledge of these fields. Currently, various integration methods are used. This is, first of all, the combination of several academic disciplines into a single subject. But different ways of doing integration can't be good or bad. It is impossible to reject one of them and apply the other, but to introduce a system of integration measures, taking into account the age characteristics of students. The introduction of such a system does not reject differentiation in education, but complements traditional subject education, contributes to the education of a broadly erudite young person with a holistic worldview, the ability to independently systematize his knowledge and take an unconventional approach to solving various problems.

The connectivity and oneness of living and inanimate nature will be demonstrated through interdisciplinary links in biology lessons. They will enable you to deliver a lesson on any topic, even those that are far removed from everyday life, in an engaging and relevant manner, complete with vivid and unforgettable examples. "Everything that has a mutual link should be taught in

the same way," Ya.A. Komensky advised. K.D. Ushinsky, writing in our time, claimed that "the knowledge and concepts given by any sciences should be organically embedded into a system."

The integration of biology lesson with other disciplines can be shown through a number of activities, during which the learners may come to the subject of biology through issues of history and philology.

Example #1 – Biology – History; the Middle Ages period

Several hosts (wheat dough cakes) left in an abandoned, half-burned church in the little German town of Wilsnack in 1383 were coated in bloody stains. Although the spots were wiped away, they resurfaced in larger numbers. The news of this "miracle" spread swiftly. The Church blamed the heretics, and the process of burning people at the stake began.

Who are heretics, exactly? Why were they subjected to such heinous treatment?

What would be your explanation for the spots?

This is an example of an introduction to the topic "Bacteria": they grow colonies on the correct substrate - wheat dough - under the right conditions; these colonies were red; "blood stains."

Example #2 – Biology – Philology

Make a presentation on the subject of "Protein Biosynthesis." After preparation, present the information in front of the class. (While completing biology assignments, the student also improves his skills in speaking in a mother tongue or in a target language). Such presentations can then be used in the classroom during the first introduction to the topic or at a later stage of knowledge refreshment.

Example #3 - Biology – History

Prepare a report on a topic that will help students better grasp the new content being covered in the lesson. **"The image of the Maid of Orleans - Joan of Arc in history,"** for instance can be implemented as well.

Summing up, it is critical that all ways to organizing such activities in the classroom are agreed upon by teachers. Teachers work together as a group to create a single algorithm for performing comparable tasks, outline the essential requirements for its execution, design, and write conclusions. And, perhaps most importantly, they assess student work using the same criteria. After mastering key skills in one class, the student proudly exhibits them in other topics, earning positive grades. Creating a holistic view of the world around the student is the goal of education. Integration should give the student the same knowledge that reflects the interconnectedness of individual parts of the world as a system, teach the child from the first steps of learning to imagine the world as a whole in which all elements are interconnected.

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