INTERDISCIPLINARITY OF CHEMISTRY AT SCHOOL THE IMPORTANCE OF TEACHING THROUGH

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The problem-integrative study of chemistry is the simultaneous acquisition of knowledge and skills by students, the integration and synthesis of this knowledge in the process of identifying, forming and concluding related interdisciplinary educational problems, the development aimed at their use is considered a holistic methodological system of research. Problem stories and learning difficulties in integrative-interdisciplinary teaching create a basis for engaging students in functional cognitive work.

Integration (in latin integratio - "connection") - the process of uniting parts into a whole, in other words, integration is understood as the highest form of expressing the goals, principles and content unity of the organization of the educational and educational process. Interactive teaching is aimed at activating the educational process, and its result is the formation of a qualitatively new integrated system of knowledge and skills.

With the help of multilateral interdisciplinary relations, teaching tasks are solved not only at a qualitatively new level, in the development and education of students, but also a foundation is created for a comprehensive view, approach and solution of complex problems. Therefore, interdisciplinary communication is an important condition and result of a comprehensive approach to education and training of schoolchildren. Integrative problem-solving environment is a learning environment designed by the teacher in which the learner understands the lack of existing knowledge and skills to serve the purpose set for him, for example, answering a question, summarizing a problem, performing a skill, observing interpretation of the essence of appearance and others[3].

Integrative learning is a configuration of practical implementation of problematic history made in the classroom, defines an integrative goal, inspires to know unknown

things and leads to mastering of new knowledge or method of action. In the course of the lesson, students' problematic thinking is improved with motivational actions. New motivational actions should serve to stimulate students' learned knowledge.

The subject of "acids" is taught in the 7th grade in high school. On the basis of the topic, the properties, use, extraction of acids are organized. Gastric acidity is a measure of the concentration of hydrochloric acid in gastric juice, which is produced by specialized parietal cells from the gastric glands. The main functions of hydrochloric acid are digestion of protein foods, antibacterial effect, stimulation of the pancreas, and activation of digestive enzymes. And most importantly, hydrochloric acid contributes to the normal processing of food and its further movement into the duodenum. So, the practical use of acids is strengthened in the topic and the connection of biological science with their role and function in the human body is explained.

It is taught in the 8th grade of the secondary school according to the general properties of the elements of the sixth group. When we focus on the oxygen element, we will strengthen its educational value with integrative directions. Oxygen makes up 29% of the air atmosphere, on this basis, the lesson is formed by giving problematic tasks to the students. Problematic question, we report that there is a popular cave in Italy called "dog cave". A person standing in it has a chance to stay for a long time, and a dog that runs there will suffocate. How can this fact be explained? Students respond sensitively to the information received and actively connect to conclude learning difficulties.

In high school, in the 9th grade, the topic of iron element and its compounds is discussed. Iron is a chemical element belonging to group VIII of Mendeleev's periodic system and is considered one of the most necessary metals for modern technology. Iron compounds are widely used in industry, agriculture and construction, and in biological science, iron is one of the main components of hemoglobin, which means that hemoglobin carries oxygen in the blood throughout the body, and is involved in the reproduction of healthy red blood cells, which contain iron hemoglobin. Iron plays an important role in many processes in the body, including energy metabolism and DNA repair. If this subject is taught to students in an integrated teaching method together with information related to biology, then the subject is considered to be well explained to students.

Each lesson should be aimed not only at learning theoretical material and forming skills, but also at organizing mental activity of students that contributes to intellectual development. In order to improve the quality of education, the

educational system of today's developed society requires the integration of chemistry with other subjects.

Chemistry is a very complex science, and students should establish cause-effect relationships during the course of the lesson. For this, it is necessary for the teacher to study a large amount of information. It is necessary to properly explain the information to students in easy ways. For this purpose, the implementation of interdependence of subjects in the modern education system leads to high results. Such inter-discipline relations are important in improving the quality of education. The generalization of inter-disciplinary connections allows applying knowledge and skills in certain situations, in the classroom and in extracurricular activities[2].

In preparation for the lesson, in order to correctly formulate all terms and explain new material, I study additional literature, use Internet resources, necessary graphs and tables on related topics, as well as local materials.

As a means of interdisciplinary education, it provides the student with knowledge that reflects the connection of separate parts of the world, teaches to perceive information. The knowledge obtained through the teaching of interdisciplinary relations awakens the enthusiasm for knowledge in students, increases interest in science, deepens existing knowledge, and helps in the formation of professional interests. Integration in education makes it possible to fulfill the developmental function necessary for comprehensive development of the student's personality, interests, motivations and needs for knowledge. Integrated classes develop students' potential, encourage students to seek knowledge about the surrounding reality, develop logic of thinking, communicative competence[1].

Complex lessons and extracurricular activities conducted in order to improve the quality of chemistry education for students gave positive results and confirmed the need to use them. The practice shows that students' interest in my subject has increased. The quality of homework has improved, the students' activity in class has increased, and the level of mastering the educational material has increased. Thus, improving interdisciplinary teaching in chemistry classes with other subjects, providing opportunities for the realization of intellectual and creative abilities of each student, developing the ability to continuously self-educate, social adaptation and creative self-expression.

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