Chemical Education Xімічна освіта

FORMATION OF SKILLS FOR COMPILING SITUATIONAL TASKS WITH ENVIRONMENTAL CONTENT IN FUTURE CHEMISTRY TEACHERS-TUTORS

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Environmental education and upbringing is a new area of pedagogy, which is currently at the stage of active development. In a modern school, ecology can cover all aspects and all levels of education. However, the most significant role is assigned to chemistry. The use of environmental pollution content in teaching chemistry activates interest in the subject and develops the need to communicate with nature, fosters responsibility in personal behavior, forms skills for safe use with native resources, protection and improvement of the environment.

Chemical problems themselves can be used to consider almost all aspects of ecology. However, situational tasks with environmental content are especially effective from the point of view of environmental education. The inclusion of this kind of task in the learning process allows you to make the theoretical material less academic, and more accessible and interesting. Along with this, situational tasks are how students comprehend and summarize information, they develop analytical and practical, communicative, and social skills. Situational tasks of environmental content contribute to students' adaptation to the real problems of the modern global world.

The training of future chemistry teachers is an important process that requires both academic knowledge and teaching skills in equal measure. Future chemistry teachers must have deep knowledge not only in the field of chemical science but also in related sciences.

Taking into account all of the above, the issue of forming the skills of future chemistry teachers to draw up situational tasks with environmental content is considered relevant. The text of the situational task should not only describe real-life situations but also contain environmental issues, for the solution of which students will be able to effectively apply such methods of scientific cognition as analysis, synthesis, generalization, explanation, etc. For the successful formation of skills in compiling situational problems with environmental content, future chemistry teachers must have a set of knowledge in various fields of science to be able to successfully carry out interdisciplinary integrations.

The content of situational tasks may include not only information on the chemical characteristics of natural objects, types of environmental pollutants, and sources of pollution but also measures aimed at protecting the environment and eliminating the consequences of the influence of hazardous factors. It is believed that the solution of situational problems with environmental content should begin with a preliminary analysis of the environmental component of the problem, an analysis of the essence of the environmental problem touched upon in it, and only then proceed to writing a reaction equation and performing the necessary calculations. When compiling such problems, it is necessary to take into account the close connection between chemistry and ecology, since the causes of many environmental problems are explained from the point of view of chemical science.

In the presented work, the search for ways to improve the effectiveness of professional and methodological training of future chemistry teachers was carried out, including through the formation of skills for drawing up situational tasks in chemistry with environmental content, the development of methods for solving such problems using information and communication technologies.