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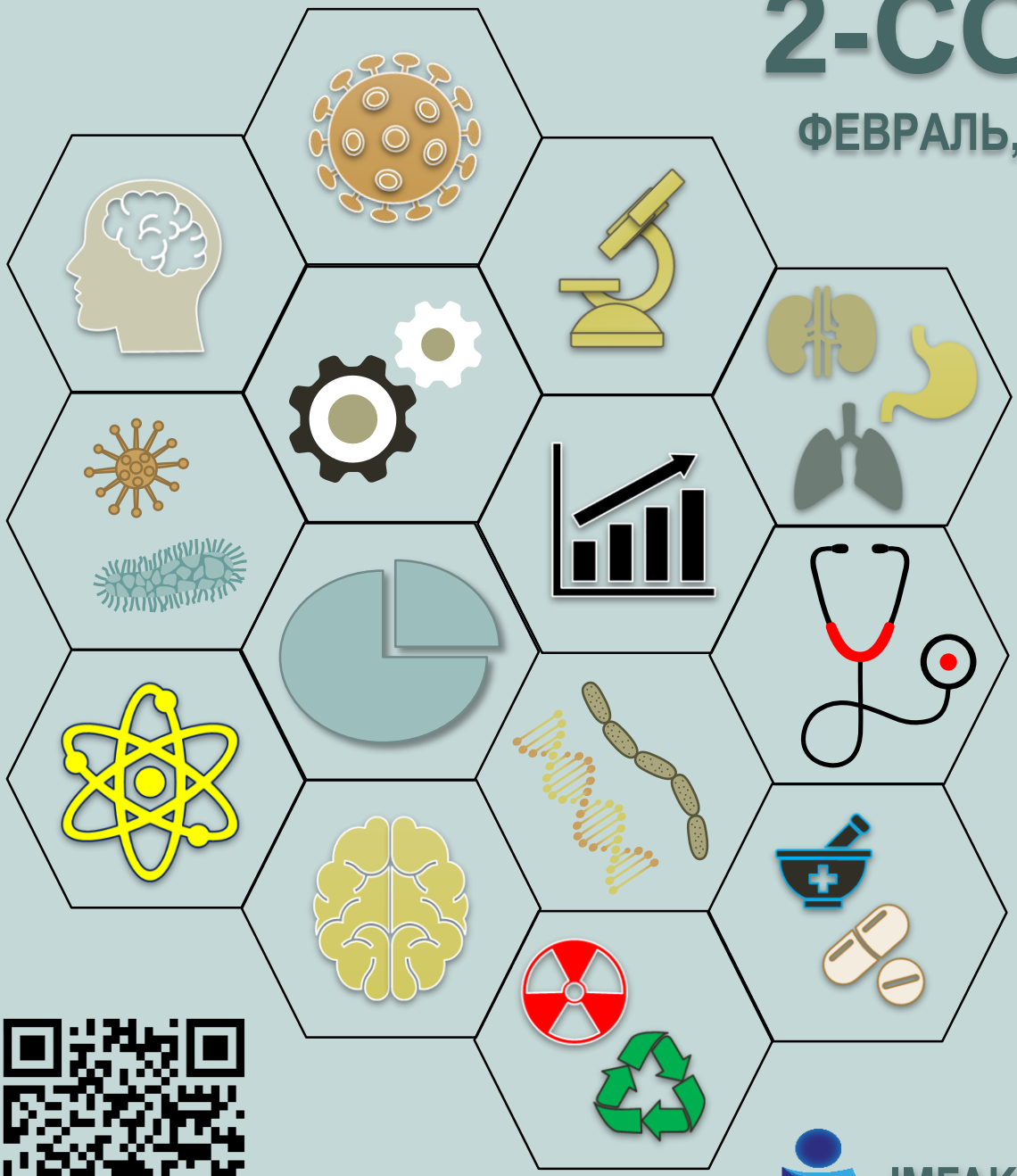

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O‘TELBAYEVA Muhayyo Alisherovna
Chemistry teacher of school No. 47,
Kungirot District, Republic of Karakalpakstan

METHODOLOGY AND THEORY OF CHEMISTRY TEACHING IN SCHOOLS, METHODS AND PROCESSES OF THEIR STUDY

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ANNOTATSIYA

Ushbu maqolada kimyo o‘qitish metodikasi maktablarining rivojlanishi bo‘yicha tadqiqotlar ko‘rib chiqiladi. Bundan tashqari, siz kimyo o‘qituvchisi bo‘lishingiz kerak. Bu bolalarning yoshiga mos psixologiyani bilish zarurligi haqida kimyo, kimyoviy bilim va amaliy usullar haqida ilmiy asoslangan. Bundan tashqari, maktablarda kimyo o‘qitish metodikasini rivojlantirish bo‘yicha xulosa va tavsiyalar ishlab chiqildi. Kimyo fani atamalari yuqori saviyada tushuntirilsa, o‘quvchilarga tushunarli bo‘ladi. O‘quvchilarning kimyo faniga bo‘lgan qiziqishini oshirish uchun ushbu mavzu bo‘yicha qiziqarli faktlar asosida taqdimot tayyorlash zarur, deb o‘ylayman. Mavzu bo‘yicha qiziqarli ma'lumotlar ushbu taqdimotda joylashtirilishi kerak. Taqdimot oxirida qiziqarli o'yinlar tashkil etilishi kerak. Bu dars albatta talabalar e’tiborini tortadi. O‘qituvchidan darsning asosiy qismini tushuntirib bo‘lgach, o‘quvchilar o‘rtasida savol-javob tashkil etish yoki shu mavzu b o‘yicha savol yaratish topshirig`ini berish talab qilinadi. Talabalar o'zaro savol almashish orqali savollarga javob berishlari kerak. Talabalar dars oxirigacha ball olishlari kerak. Bu esa o‘quvchilarning fanga qiziqishini oshiradi.

Kalit so‘zlar: Kimyo, o‘qitish metodikasi, kimyo fanidan bilimlar, ilg`or mutaxassislar, kimyoga hissa qo‘shgan olimlar, kimyoning kelib chiqishi, kimyoga oid atamalar. Kimyo o`qitish tamoyillari va mezonlari.

АННОТАЦИЯ

В данной статье рассматриваются исследования по развитию методологии преподавания химии в школах. Кроме того, вы должны быть учителем химии. Он научно основан на химии, химических знаниях и практических методах о необходимости знать психологию детей для их возраста. Кроме того, разработаны выводы и рекомендации по разработке методики преподавания химии в школах. Химические термины понятны учащимся, когда они объясняются на высоком уровне. Считаю необходимым подготовить презентацию на основе интересных фактов по этому предмету, чтобы повысить интерес учащихся к химии. Интересную информацию по теме следует размещать в данной презентации. По окончании презентации следует организовать интересные игры. Этот урок обязательно привлечет внимание учащихся.

После объяснения основной части урока учитель обязан организовать сессию вопросов и ответов среди учащихся или создать вопрос по данной теме. Студенты должны ответить на вопросы, обмениваясь вопросами друг с другом. Учащиеся должны получить оценку к концу урока. Это повышает интерес учащихся к науке.

Ключевые слова: Химия, методика преподавания, знание химии, передовые специалисты, ученые, внесшие вклад в химию, происхождение химии, термины, связанные с химией. Принципы и критерии обучения химии.

ANNOTATION

This article examines research on the development of chemistry teaching methods schools. Also, you must be a chemistry teacher. It is scientifically based about the need to know psychology appropriate to the age of children chemistry, chemical knowledge and practical methods. In addition, conclusions and recommendations on the development of chemistry teaching methods in schools developed. Chemistry terms are easier for students to understand if they are explained at a high level. I think it is necessary to prepare a presentation based on interesting facts on this topic in order to increase students' interest in Chemistry. Interesting information about the topic should be posted in this presentation. At the end of the presentation, interesting games should be organized. This lesson will definitely attract the attention of students. It is required from the teacher that after explaining the main part of the lesson, it is necessary to organize a question-and-answer session among the students or to give the task of creating a question on this topic. Students should answer the questions by exchanging questions among themselves. Students must earn points by the end of the lesson. This makes students more interested in science.

Key words: Chemistry, teaching methodology, chemistry knowledge, advanced specialists, scientists who contributed to chemistry, origin of chemistry, terms related to chemistry. Principles and criteria of teaching chemistry.

Since the independence of the Republic of Uzbekistan, we have witnessed drastic changes increased need for skilled, advanced professionals. Educating boys and girls who think independently of school is one of the urgent tasks of today. The young generation needs to know not only certain knowledge, but also knowledge to have the spirituality and enlightenment of an independent state builder and their attitude to work and behavior is enviable. In our country, great privileges are given to teachers and young people generation That is why higher education is necessary in the first place admitting educated, spiritual, Uzbek-minded young people to the ranks of students; arming them with knowledge and raising them to the level of a great person feeling The services of science teachers are great in this.

The teacher should be a well-rounded chemistry specialist. He must know psychology of children according to age, except for chemistry, chemical knowledge and practical methods. He must master the technique of doing everything pre-education stages. Knowing the didactic foundations of the subject he taught, should convey knowledge based on his life experience it is necessary to develop general methods of education for children and youth. It is mostly in the hands of teachers to get students interested from a young age. All teachers will have a great contribution in finding their place in the future. Teachers are required to know how to give knowledge to students and guide them in the right way.

Currently, a high level of attention is paid to the training of young personnel. Each teacher should supplement the experience of others with his own experience, without copying them, and then the learning process will be perfect because everyone has their own style and personality. The methodology of teaching chemistry is studied in a certain order. First, the main tasks the study process is taken into account. Then methods of organizing the learning process, means of teaching, forms and methods of scientific organization of teacher's work is taken into account.

Chemistry teaching methods are not only taught through lectures, but students are required knowledge of experimental demonstration methods, lesson planning, chemical problem methods of solving, forms of teaching, etc. Therefore, they must do coursework, independent work in pedagogical practice. When teaching methods, it is necessary excursions to schools, academic lyceums, vocational colleges. This is important organization of special courses, internships from special courses. The development of science and technology is increasing the interest of students in streaming a wave of knowledge and events.

From today's point of view, students are needed high cognitive activity, good mental activity, ability to think independently. Such qualities are formed in students by school teachers. It is everyone's duty to work responsibly in such an honorable work for the development of our foster nation independent country, for our future. Solving such a responsible task Arming students with deep and solid knowledge depends on the method of interest focus on independent work and thinking in science. The more the specialist pays if he pays attention to the methodology of his work, he will achieve great results. The main teaching methodology of the teacher's work teaching methodology and educating students. Methodology is the basis of chemistry teacher's work it is necessary to increase knowledge and skills about teaching chemistry. The teacher is required to approach each lesson with attention. It is possible to further increase the knowledge of students by organizing games based on the interests and suggestions of students, including presentation works for topics in the textbook of chemistry. The conclusions of chemistry require that they be closely related life and they must be interpreted philosophically.

Chemistry should be taught gradually formation of chemical outlook in students. Duties of a chemistry teacher:

– for the future of our independent Uzbekistan, make students conscious and thorough mastery of the basics of modern chemistry;

– to introduce students to the scientific foundations of chemistry interpreting and using nature;

– pay special attention to the formation of students' skills to look at nature from a forming a materialistic point of view is the task of teachers.

First of all, it is necessary for the teacher to give students an understanding of the essence, tasks and history of the science of chemistry. It is required that the teacher arouses interest in the students in the first lesson. I also use different methods in the teaching process. This will increase the capacity of the students and will be remembered.

*To educate students to know how to use chemical experiment, which is one of the tools it is necessary to try to increase scientific knowledge;

*Preparing students for work - it was necessary to prepare them for future practical training the activity should be explained;

*it is necessary to increase students' interest in chemistry;

*it is necessary to teach students to search and learn independently;

*formation of students' knowledge and skills in everyday life;

*attracting students to socially useful work;

*explain the importance of chemistry in our life;

*to reach the level of physically strong, mentally mature people;

*Familiarity with periodic law and periodic system of elements will consist of explaining the main content of the chemistry course.

Teaching chemistry is a powerful tool for educating students to gain an understanding of chemistry our hard-working and patriotic young people, deeply interested in science, ability to think it is necessary to give assignments for them to work independently on scientific topics. This shows that it is a method of explaining the basic concepts in chemistry to students and the laws must be gradually brought up in such a way as to look at history It is the task of teachers to develop in the right perspective. From methods of teaching chemistry methods specific to teaching chemistry in particular, as well as in general pedagogical methods can be used. For example, the experience problem and an explanation may be:

Experience first, then comment;

First the explanation, then the experience;

Explanation and implementation of experience together;

Give homework, show experience, then explain.

It is necessary to use it in the development of new methods of teaching chemistry general pedagogical research: pedagogical observation, researcher interview with teacher and student, questionnaires, pedagogical organization lesson observed, re-experiment. A chemistry teacher must be ideological a well-formed person, a deep master of science, knowing how to apply the basics correctly to be aware of the theoretical knowledge of education and training in practice, as well as Pedagogical experience in the field of chemistry teaching methodology. has a special place. Because this is a pedagogical tool that teaches and guides the content of science chemistry at school and the laws of its understanding by students. the essence of chemistry teaching methodology is the laws of the teaching process as a science chemistry, includes: purpose, content, methods, forms, tools and activities having questions and answers and discussions between the teacher and the students increases the interest of the students and increases the experience of the teacher.

RESULTS

There are the following methodological directions on the basis of chemistry education methods:

1. The general dialectical method, in which the development of concepts in the process of thinking, interdependence, internal interdependence of different parts of teaching contradictions, a problematic approach to solving them.

2. A systematic-structural approach, which includes the separation of the main departments to teach, to find their interdependence, as well as to show stability, closeness the interaction of elements and unity of teaching methods of school chemistry.

3. Review of the above methodical categories based on three teaching functions: education, training and development.

4. To review the basics of the methodology of teaching chemistry through didactics approach.

Didactic education of the teaching methodology is considered in the teaching methodology of chemistry is taught by the laws of education, the development of knowledge is psychological sciences. During training, these three components interact and become a chemical axis based on dental technology. So, the methodology of teaching chemistry a pedagogic science that teaches, educates and develops students at school teaching chemistry classes. It is located at the address of Chemistry Teaching Methodology It is the heart of pedagogy, chemistry, social sciences and other sciences is inextricably linked with them. M. Lomonosov, N. Zinin, A. in the development of chemistry teaching methodology. Voskresensky, D. Mendeleev, A. Lavoisier, A. Butlerov, N. Beketov, L. Chugaev, D. Konovalov, Kekule, I. Kablukov, A. Reformatsky, I. Pisarevsky, B. Menshutkin and other famous chemists contributed, because they also taught chemistry to their students. Students. These scholars also had several textbooks written on a fundamental basis, new styles and presentations should attract readers' attention. The goal of each lesson is to increase students' attention to this subject. Pupils should be given new knowledge in each lesson.

Russian scientists M. Lomonosov, D. Mendeleev, A. Butlerov created many works contributions to the creation of the scientific basis of chemistry teaching methodology. In a process of uncompromising struggle against idealism and empiricism, these scientists not only created new directions in chemistry, but also laid the foundations for the methodology of teaching chemistry on a scientific-materialistic basis. M. Lomonosov (1711-1765) ... founded a deeply religious gymnasium and university. Russian soil could produce its own Platos and sharp-witted Newtons.

He wrote and lectured at Moscow University. D. Mendeleev's "Fundamentals of Chemistry" (Basic Chemistry), "Dream Thoughts" (Zavetnye mysli), "Teacher Training School Project" (Project) three teachers) brought chemistry closer to practice. On the basics of chemistry, he said: "Wu is my favorite child - my first thoughts, my pedagogical experience, my Sincere thoughts are in this work." He advocated the connection of chemistry with life. In in addition to drawing conclusions, "developing recommendations on ways to draw them out conclusions" encourage students to use conclusions, "practice chemistry, i.e to ask nature and listen to its answers in laboratories and books". Teaching chemistry should gradually form a chemical outlook in students. This is the main task of the teacher. The teacher should be able to divide the class hours correctly.

In the development of chemistry teaching methodology, it is necessary to touch on every information.

Because it contains methods teaching chemistry, equipping school chemistry classrooms, creating chemistry collect students' concepts, problems and exercises from chemistry, conducting experiments with organic substances taught in a high school chemistry course and so on methodological problems. areas of problem solving through Even now, chemical methodology includes the task of scientific development the following issues:

a) Scientific foundations of chemistry;

b) Chemistry course system;

c) In the process of teaching student’s chemistry, the lesson process should consist of sharp discussion and question answers;

d) Methodology of chemical experiments conducted at school and their analysis;

e) The main laws of the educational process in chemistry;

f) System of extracurricular activities in chemistry, etc.

The above scientific discoveries prevented the roots of various idealistic ideas and immediately strengthened dialectical-materialist ideas, reflects the essence of nature and laws. The task of a chemistry teacher is to prepare the young generation to become mature and mature people independent republic. Arming students with modern knowledge is most important.

It is an important task of our school and it is assigned to the chemistry teacher. In the process of teaching chemistry, polytechnic education of students is the most formation of dialectical materialistic worldview bases, upbringing in the spirit of patriotism and nationalism is an important task of a school and chemistry teacher. In order to provide polytechnic education to students:

– Introduces students to the most important branches of the chemical industry, emphasizes them and explains the processes, touches on the scientific principles that form the basis of modern chemical production.

– Explains the chemical basis of agricultural production with examples.

– Shows students the achievements of chemistry and the chemical industry, it also shows how they will develop and what path they will take in the future.

– Draws students' attention to how the latest advances in chemistry are being used should be explained with examples based on our practical life.

– Provide students with the most important learning skills and it is recommended to teachers to give brief new information about the nature and tasks of chemistry in practical life.

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