

## METHODS OF TEACHING THE TOPIC HYDROCARBONS IN SCHOOL EDUCATION.

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### **Abstract**

*this article shows situations related to the professional activities of students and their analysis, the ability to think logically, the skills of chemistry teachers working together based on the use of innovative technologies in teaching the subject to students. At the same time, it is emphasized that the formation of information and communication competence among students when teaching chemistry at school should be carried out consistently and continuously.*

### **Keywords**

*ladder-Ladder method, Alkane, Alkyne, acetylene, educational technology*

The main goal of the reforms carried out in the republic in the field of education is the upbringing of a harmonious young generation with deep knowledge. It is clear to everyone that every science has arisen as a result of changes in nature, observation of problematic issues, search for solutions. Today, every science rises to the top of its period of development and finds its place in our lives.

In order to increase the effectiveness of education, ensure the implementation of state educational standards, and ensure the quality of education, work is required on the basis of the latest modern technologies.

When studying chemical sciences, the use of pedagogical technologies becomes important. For example, if a comparison of subjects is carried out in a state of thinking, memorization, generalization, students develop knowledge, skills and abilities. For example, the "ladder-Ladder" method - this method teaches students to think and memorize individually and in small groups on the subject passed or to be handed over, to memorize the acquired knowledge, to be able to generalize the accumulated thoughts and express them in the form of a letter, drawing, drawing. This method is conducted and presented in writing together with students individually or in groups.

The purpose of the method. Teach students to think freely, independently and logically, work in a team, explore, concentrate thoughts and form theoretical and practical understanding from them, be able to influence the team with their opinion, approve it, and also apply the knowledge gained in interpreting the basic concepts of the subject.

Application of the method: it can be used in lectures (if possible and conditions are available), practical and laboratory classes conducted individually or in small groups, as well as in control classes.

The tools used in the training: a handout, a felt-tip pen (or a colored pencil) with a note of subtopics on the left side, made on paper in A-3, a-4 format (corresponds to the number of highlighted subtopics of the topic).

The order of the training:

- \* the teacher divides students into subgroups of 3-5 people depending on the number of subjects (preferably the number of groups is 4 or 5);

- \* students get acquainted with the purpose of the lesson and the order of its conduct. Each group is given sheets with a small thematic inscription on the left side of the sheet;

- \* the teacher instructs the participants to familiarize themselves with the subheadings written in the handout and write down what they learned based on this topic using a felt-tip pen in a free space on a piece of paper, thinking together with the team, and calculates the time;

- \* group members jointly express in writing (or drawing, or educational drawing) a small topic set in the handout. At the same time, participants will have to provide as complete information as possible on a secondary topic.

- \* when the handouts are filled out, one of the group members makes a presentation. The material prepared by the groups during the presentation is necessarily logically posted on the audience board (in the form of a ladder;

- \* the teacher comments on the materials prepared by the groups, evaluates them and completes the training.

Note: such an organization of their lesson teaches students to think independently, to memorize the topics they have passed and mastered, to present them in writing (or in the form of a drawing, drawing), to generalize thoughts.

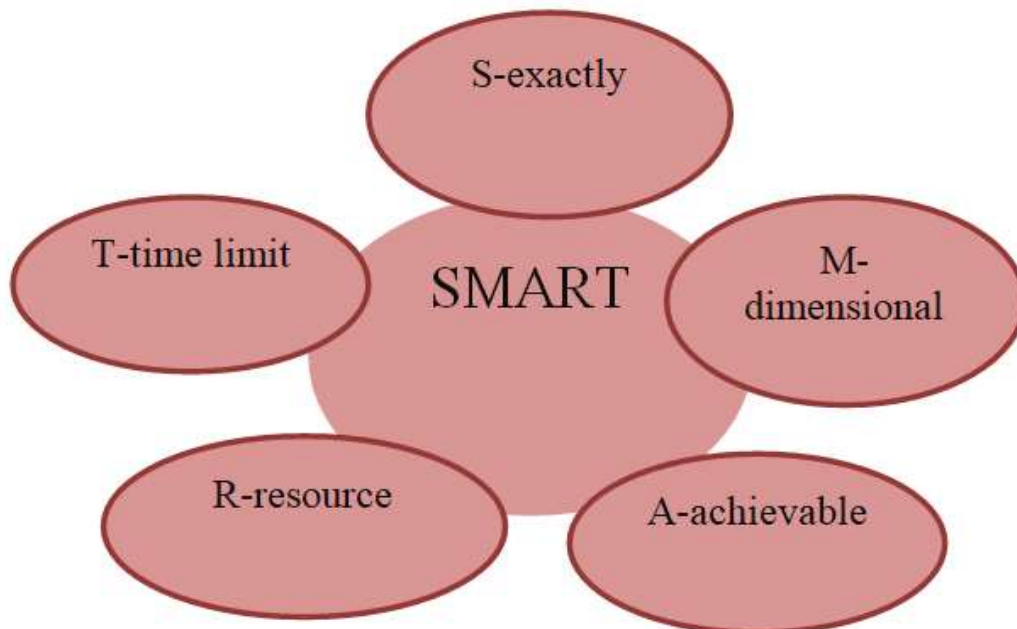
№	Hydrocarbons	Their main formulas and properties
1.	Alkanes	
2.	ЦИКЛОАЛКАНЫ	
3.	Alkenes	

4.	Alkadienes	
5.	Alkynes	

SMART Education technology. Speaking about the period of the arrival of the information age, ICTs, the stages of their application in the real educational process, the creation of a modern information infrastructure, the creation of completely new multimedia curricula and their introduction into education are gradually coming to an end. At this point, a natural question arises: how to evaluate the knowledge and experience gained, what should be the next step?! For example, the problems of traditional learning processes related to the use of ICT, including: informal educational associations in various forms, which are becoming more and more common in the world's Internet networks, replacing "real" educational institutions with "virtual" ones, distance learning, etc.

The abbreviation Smart-SMART (smart, insightful, technological) was first introduced in 1954 by an American scientist of Austrian origin, an economist, publicist, teacher, one of the management theorists of the XX century, Peter Ferdinand druk. Then

Meyer in 1965, and then George T. in 1981. The ones that Doran used in his scientific work. SMART consists of the initials of the following words



Example. The smart goal of studying chemistry.

Suppose someone expressed a desire to study chemistry in order to work as a chemist in the future. The goal can be set as follows: S – man clearly expresses his

goal-the study of science. He also knows how to work alone, what difficulties this process involves and where to start, this qualification makes it possible to get a good job.

How to measure M-Science knowledge? The measure in this case may be the presence of a certificate. Such a certificate can be obtained by passing national exams. A-is it possible to achieve such a goal? Yes. A person has a lot of free time with Internet access, training courses and the opportunity to find suitable funds. R-is there any benefit from solving this problem? Yes. Many advantages can be obtained from proficiency in science. T-putting workouts a person can set a certain time frame, for example, one year, so as not to send. This is enough time to get the necessary qualifications in science. Thus, "smart" is a derivative of a system or process that manifests itself in interaction with the environment and allows you to quickly respond to changes in the external environment; adapt to the conditions in which changes occur; develop independently and self – control; effectively achieve results.

Acetylene and its specific qualitative reactions can be demonstrated to students audiovisually with the help of laboratory experiments on the topic "production and properties of acetylene". For example, the demonstration of this chemical process in the laboratory is currently using intelligent technologies through audiovisual demonstrations increases students' interest in chemistry. This is due to the fact that chemical processes slow down phenomena in particles invisible to the eye, the part that is in a state of chemical experiment, allowing you to see them again and again if necessary. The animated display of chemical processes or the presentation of audiovisual cases of the phenomenon captured in the image using smart technologies during the experiment helps to increase the level of knowledge of students, the formation of skills and abilities in the technologies of this experiment.





In conclusion, it can be said that the above recommendations lead students to creative thinking, the increased formation of their conclusions through assignments, the achievement of the goal that the researcher poured in front of them.

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