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USE OF INTERACTIVE METHODS AND THEIR EFFECTIVENESS IN TEACHING CHEMISTRY

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ABSTRACT

The modern world places high demands on the quality of school education. Graduates do not need only theoretical knowledge, but also the ability to think creative, out of the box. Chemistry is enough difficult subject of the school curriculum, so it is important introduce new teaching technologies in order to increasing motivation for learning among schoolchildren by the most classical method of learning is ineffective teaching option - the teacher tells, the student listens. The child is a person, it is impossible mechanically convey knowledge to him. Therefore it is important to do from the student an active participant in the educational process. It has been proven that the acquisition of knowledge is possible only with own activities and interest in the subject. Thus, the teacher needs to be the organizer active student activity. Knowledge must "created" in the process of active activity of students, and the teacher should encourage them to do so.

Keywords: intellectual, interactive teaching, project, individual, maximum, discussion, creative, technology.

INTRODUCTION

The practice of teaching chemistry in secondary school shows that the quality of knowledge in chemical disciplines among students worsens every year. We explain this by the fact that the use of exclusively traditional teaching methods is no longer enough to teach modern schoolchildren. During the lesson at students on the tables have a range of the latest technical developments (gadgets) in the field of communications and instead of listening to the teacher's story, students prefer another source of information. Teachers are required to provide quality a new approach to teaching, in which the learning process each student will be involved. The use of interactive learning increases the interest of students in the knowledge of chemistry. It is a mistake to assume that interactive learning is limited to teaching using an interactive whiteboard.

MATERIALS AND METHODS

Today, there are many forms of implementation of interactive teaching methods. The most common are a round table, brainstorming, discussion, debate, role-playing and business games, creative tasks, work in pairs or microgroups, various excursions, projects and more. It is comfortable and expedient both for the teacher (there is more opportunity to view the activity of all students) and for students (it is more comfortable to communicate, work on the task) to

use the form of work in pairs in the lesson. Pair work is a kind of group work, however, due to the minimum number of group members, the individual capabilities of each student are used to the maximum, students feel more comfortable and calm [1].

Working in pairs, students can test each other's knowledge, consolidate new material, repeat a recently covered topic, evaluate the interlocutor's knowledge, discover facts that are not yet known. But also the form of work in the lesson can be individual, group and collective. The individual form involves the task to be completed by one student. The group form is an organization of activities in the lesson, in which small groups of 5-7 people are created, who perform one back. In collective work, the whole class participates in solving a single problem. In the lesson, teachers can use various interactive forms of organizing activities in the lesson. The most popular and interesting forms are discussions, debates, educational, business, role-playing games, brainstorming and others.

Discussion - (from lat. discussion) research, consideration, discussion. "Discussion" is a pedagogical teaching method that increases the intensity and efficiency of the educational process by actively involving students in the collective search for a true, correct solution to the problem. The discussion helps to include students in the search for solutions to the team's problem by offering their own solutions and voicing the evidence for their words. This method involves the assignment of great responsibility for making a common decision. Students can demonstrate their leadership qualities and their knowledge, as well as meet the needs for peer recognition. Debate is one of the forms of such teaching method [2].

RESULTS AND DISCUSSION

Interactive learning technologies consist in the communication of students during joint learning activities, which allows creating such conditions in the lesson under which mutual learning and mutual verification will take place. If interactive learning technologies are implemented using mobile devices, then learning can be carried out at a distance in real time. And thus we will be able to conduct training in the subject, as well as teach students how to use high-tech tools correctly. We will also increase the cognitive activity of students, since modern schoolchildren cannot imagine their world without smart phones and tablets. Today, the teacher is not the only source of information, he acts as a consultant or guides students to independently acquire knowledge, so the use of interactive teaching methods is necessary in chemistry lessons. A modern chemistry lesson allows you to develop creative abilities, creative thinking, the ability to search and process information in an educational form. The use of various means of implementing interactive learning in chemistry lessons will make it possible to activate the attention of students, interest them in knowing the subject and form the ability to self-develop and self-learn. With the regular use of interactive methods, students develop an interest in the subject being taught through the means used in everyday life. For example, in the 9th grade, in the chemistry lessons in the metals section, we can invite students to sort out the issue with the help of debates, offering homework in groups to make a video. The first team is "The Benefit of Metals", the second team is "The Harm of Metals". Filmed videos are presented in class or posted on a specially created website. After watching each video clip, the opposing team asks questions, and the responding team tries to answer the questions and support their arguments. At the end of the debate, the educator sums up all the arguments presented and each team

reports their findings. A positive result will be considered if each team comes to the same conclusion - that metals are necessary in human life. With the help of various interactive images that we can create for the subject "Chemistry", the student sees clear highlighted parts of the picture, which the teacher focuses on when explaining a new topic. With the help of various programs, images are developed, in which, when one part is selected, its brief description appears. Such images attract the attention of students and allow you to clearly present what is being said at a given time in the lesson.

There are lots of games which are essential and useful for teaching chemistry. If teachers should use different games, interactive technologies during the lesson, it would be more fascinating and also the teachers will be involved the students' consideration into the lesson.

Game technologies.

Intellectual and creative games (ITGs) stimulate the development of cognitive interests of students, contribute to the development of their intellectual and creative abilities, enable children to assert themselves and realize themselves in the intellectual and creative sphere through the game, help to fill the lack of communication. ITI can be used not only in extracurricular and extracurricular activities, but also in the classroom (when learning new material, repeating what has been learned, monitoring students' knowledge, etc.). The didactic game allows you to effectively implement all the leading functions of learning: educational, upbringing and developing based on the principles of pedagogy of cooperation. More free, psychologically liberated control of knowledge is carried out. The painful reaction of students to unsuccessful answers disappears. The approach to students in teaching becomes more delicate and differentiated. As a result, the cognitive activity of students is stimulated; mental activity is activated; spontaneously remembered special information; associative memorization is formed; problematic issues are resolved; personality traits of the student's character are revealed; increased motivation to study the subject.

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What problems does the use of this form of training solve?

More free, psychologically liberated control of knowledge is carried out. The painful reaction of students to unsuccessful answers disappears. The approach to students in teaching becomes more delicate and differentiated. A card index of didactic games was compiled: "Chemical auction", "Chemical loto", "Chemistry in your hands", "Own game", etc.

CONCLUSION

Each student has his own vision of the situation, his own language. Therefore, each needs its own individual approach. The most complex and time-consuming business and role-playing games. Conducting such games allows you to achieve the following goals: to teach students to highlight the main thing in the content of educational material, to present it in a short form; develop text analysis skills, associative thinking, independence of judgment, promote self-determination of students, develop communication skills, broaden their horizons, repeat and generalize the studied material. In my practice, I systematically use game forms of organizing knowledge control and constantly notice how this increases students' interest in the material being studied and the subject as a whole, as students who have been reading so little lately

suddenly start flipping through books, reference books, encyclopedias. So in the classroom, when studying topics related to ecology, for example, on the topic “Natural sources of hydrocarbons and their processing”, I use role-playing games using expert groups. The class is divided into two groups: "specialists" and "journalists". The first select material and prepare a visual aid. The second prepares questions that they should ask during the game. To consolidate materials in grades 8-9, I use didactic games: “Chemical Cubes”, “Chemical Lotto”, “Tic-Tac-Toe”, “Find the Mistake”, “Chemical Battle”. Also in extracurricular activities I spend spectacular intellectual and creative games: “KVN”, “What, where, when”, “Hour of glory”. In conclusion, the best way to teach chemistry is to utilize diversity interactive technologies and games in lessons.

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