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USE OF DIDACTIC GAMES TO INCREASE THE EFFECTIVENESS OF TEACHING CHEMISTRY LESSONS

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Abstract: Today, gaps in students' knowledge of chemistry are being identified. The following are examples of didactic materials that can be used to fill these gaps. The article provides examples of didactic materials that can be used to eradicate gaps.
***Keys words**:* methodology, didactics, pedagogy, small group, lesson, teaching, education, training.

摘要：今天，学生在化学知识方面的差距正在被发现。 **以下是可用于填**补这些空白的教学材料示例。 **本文提供了可用于消除差距的教学材料示例。**
关键词：方法论、教学法、教学法、小组、课程、教学、教育、培训。

One of the most important factors that can help a teacher to effectively organize the teaching process and fully achieve its goals is the use of relevant approaches in pedagogical practice, improving the technology used for many years. , based on a creative approach, to create new ones and apply them in practice. The methods chosen for the teaching process should be focused on solving complex tasks, and ensure that teachers and students work together to teach and master the knowledge imparted in a quality manner.

The teacher and the student, who are an integral part of the lesson, should be equally involved and active, especially to ensure that students are interested in learning. clear and complete assimilation must be achieved. In the analysis of the theoretical basis and practical results of the use of didactic games in chemistry lessons VNVerkhovsky, PPLebedeva, LMSmorgonsky, Ya.L.Goldfrab, VPGarkunova, LASvetkova, MSPak, SAMadyarov, NXKhojayev, HTOmonov, O '.Q. The work done by the Tolipovs is noteworthy.

Research in recent years has shown that the extent to which a new topic is mastered in the stages of explanation and reinforcement depends on the performance of sensory analyzers. Studies have shown that the efficiency of listening and receiving information increases by 15%, by explaining knowledge to students using visual aids by 25%, and the use of both senses in the classroom increases the level of students' perception by 65%. .

Chemistry, one of the natural sciences, differs from other sciences in its complexity. The use of didactic games in the classroom is especially important to make this subject more understandable to young people. A modern chemistry teacher can use intellectual, mixed, and action types of didactic games in their lessons. The use of didactic games in chemistry lessons not only increases students' interest in

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science, but also helps them to easily understand more complex topics. Working in groups and small groups is very useful when using didactic games in chemistry lessons. Because in this, students work together, understand each other and help each other. Here are some didactic games that can be used in chemistry lessons and how to use them.

,, **Who is smart**?" didactic game.

In order to use the game, in the oxidation lesson, representatives from each group come out and say the names of the corresponding oxides one by one. For example, nitrogen five oxide, aluminum oxide, chromium two oxide, sodium oxide, and so on. If someone mispronounces or fails to say the appropriate oxide name, that student is out of the game. The remaining students in the end are the winners of the game.

Didactic game "**Reverse Pyramid**".

In this game, each group is given a card with the numbers 5 → 4 → 3 → 2 → 1. The numbers on the card are written inside the pyramid. Students will be asked to write concepts that can be grouped into 5, 4, 3, 2, or 1 groups. For example, there are five types of salts, and there are four types of inorganic compounds.

Didactic game "Find the excess".

Students will be given a series of 3 formula formulas. One of the compounds in this row is redundant. Identifying redundancies requires students to think logically. For example,

1.Oxygen, sulfur, sulfur oxides.

2. Nitrogen, hydrogen sulfide, hydrogen chloride.

3. Iron sulfide, hydrogen, chlorine.

4. Silicon oxide, carbon, zinc.

5. Chromium, calcium, aluminum oxide.

Didactic game "**Digital dictation**".

This game is based on the connection between chemistry and mathematics. Students write the reaction equation, replacing the numbers with an element of the appropriate sequence number. They equate the equation by setting the appropriate coefficients.

For example,

(1+17)+(11+16+1); $HCl+NaOH=NaCl+H_2O$

(1+14); $3H_2+N_2=2NH_3$

Students who write correctly will be graded.

In the Equation for Coefficients game, students are given a sequence of coefficients. Students write a reaction equation that corresponds to the appropriate sequence.

1+1=1+1 $HCl+NaOH=NaCl+H_2O$

1+2=2+1+1 $Na_2CO_3+2HCl=2NaCl+H_2O+CO_2$

1+2=1+2 $H_2SO_4+2NaOH=Na_2SO_4+H_2O$

Didactic game "I asked, you answer". In this game we can ask the following logical questions:

1. What happens if we mix calcium hydroxide with slaked lime?

A: Nothing, because they are both the same substance.

2. What happens if sugar is dissolved in water?

Answer: A solution of sugar is formed in water.

3. What happens if the litmus paper is immersed in a solution of potassium sulfate?

The color does not change because the environment is neutral. It does not change the color of the litmus in a neutral environment.

6. In Mendeleev's table, an oxide-forming element with a molecular mass of 102, living in the 3rd entrance, is missing. Find the element.

Answer: Al

From my own experience, I can say that using such interesting didactic games in chemistry lessons is very effective. The level of mastery of the knowledge imparted by the teacher is proportional to the level of their interest in science. Therefore, didactic games that make the student both mentally and physically active should be used for interesting lessons.

Depending on the level of complexity of the topic, the potential of the students in the classroom, which didactic game to use in the classroom depends on the creativity of the teacher. Because each person is individual and has a different way of thinking. From their point of view, teachers can improve existing didactic games or create new didactic games.

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