



USE OF NON-STANDARD METHODS IN TEACHING CHEMISTRY - THE REQUIREMENT OF THE TIME

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Article history:	Abstract:
Received: 8 th November 2022 Accepted: 10 th December 2022 Published: 10 th January 2023	This article describes the author's experience of using new pedagogical technologies in teaching chemistry, presents the essence of didactic game technology and the scenario of a role-playing lesson "Litigation over the element "Oxygen".
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It is an important task for every pedagogue to educate the Republic of Uzbekistan educated, fully mature, well-rounded citizens. The process of implementing this task, a new approach to teaching students, requires teachers to be very demanding towards their profession and others, that is, learners. It is not a secret to anyone that replacing the outdated technology of the pedagogical process with a new one, approaching the modern school based on the requirements of the time, and implementing the project of new methods into the lesson is becoming one of the main tasks [1-2].

In the occurrence of this case, J. G'. Yoldoshev, U. Tolipov, N. Gulamova, Yu. Amirjonova, D. Nuriddinova, M. Achilov, T. Saidov, M. The scientific-theoretical and practical-methodical views, experience and researches of pedagogic scientists like H. Usmonboboeva became an important basis and factor [3-4].

Experiences gathered in a number of developed countries have shown that interactive (non-standard) methods are very effective in the process of organizing a lesson on a new basis. [5-6].

In this article, we covered our experience of using non-standard, interactive forms of teaching in chemistry classes [7-8].

Game lessons. In non-standard classes, you can also conduct exercises in the form of games. It is carried out during the whole lesson, at some stage of it. The game-workout to be done is designed in advance: the game must be an educational project in the form of an educational activity [9-10].

Role playing lesson. It is more convenient to learn chemistry topics in the form of a role-playing game, and since chemistry studies substances and their properties, for example, the topic "Oxygen" can be conducted in the form of a role-playing lesson – trial [11].

Pupils play the role of chemical elements.

A dramatized trial lesson on the chemical element "oxygen".

Host: Turings are coming to court.

Today, in 1772, the Swedish scientist K. In the periodic system of chemical elements discovered by Scheele, the element of the main group of the VI group of the 2nd period is judged on "oxygen" [12].

Accusing and exculpatory articles in today's trial: carbon (II) oxide, - aluminum oxide, nitrogen (I) oxide,

magnetic ironstone, - potassium chlorates and bleach

witnesses include acetylene, - sodium peroxide, - hydrogen, - calcium oxides.

Sir: the role of the judge is carried out by the chemical element gold in the periodic system of chemical elements.

Defendant: Mr. Judge, today I want to participate in the trial as the defendant of oxygen element.

Judge Mahamat.

Whitener: Oxygen is the most precious element. There is no life without oxygen. All living organisms breathe from it. Oxygen is the 3rd most used in industry. Oxygen is an effective means of accelerating metallurgical processes. Most of the compounds that form oxygen are used in various fields [13].

For example: oxides such as and make up the composition of paints.

- and carbon dioxide is the main food of green plants, and is used as an invaluable component in the preparation of cooling drinks.

- silicon (IV) oxide - used in the preparation of glass, cement and other building materials.

Today, I brought a series of fashions to the trial as proof that oxygen is a precious element.

- acetylene. I form an acetylene-oxygen flame with oxygen. This flame goes up to 30000 C with heat release. It helps to cut and weld metals in different



shapes.

calcium oxide. I am very happy to have formed a compound with oxygen [14]. I'm technically called quicklime or quicklime. Builders call me "kipeloka" because I boil hard when combined with water. My solution in water is used as a building material. And the builders call me "Pushonka" because I am smooth as cream and white [15].

- hydrogen. I am very good friends with oxygen. The compound formed with oxygen is water, which is considered the source of life.

Water is primarily a necessary substance for the life of living organisms. Eh-heh, how many wonderful and strange things can be said about water. It was not for nothing that our ancestors said, "Where there is water, there is life." All biochemical processes in living organisms take place in the presence of water. Water is the most important chemical raw material in the chemical industry.

- sodium peroxide. Dear judge. I'm an oxygen agent, largely in air purification, and a substance that supplies oxygen to humanity in submarines. If it wasn't for me, would submarines be able to stay under water for so long?

Oxidizer: Your Honor, this is only part of the information on oxygen.

Judge: Who has an idea?

The elements sitting in the hall are all substances in one voice:

- Oxygen future trust;
- There is no life without oxygen;
- Oxygen is the main raw material in the chemical industry;
- Compounds that form oxygen are widely used in various fields.

Judge: Honorable members of the court who participated in the trial.

Judge: Accused Oxygen, please introduce yourself.

Oxygen: I was discovered in 1772 by the Swedish chemist Scheele. I have 3 different isotopes: O816, O817, O818. My Latin name is Oxogenium, which means I am an oxide producer [16].

I make up 49% of the total mass of the Earth's crust, 65% of the human organism, 58% of soil, 53% of sand, and 89% of water. I have 2 different looks in nature. Oxygen and ozone.

Judge: The trial will continue.

Dear Oxygen Element, we have received a number of complaints about you. You can join some elements. As the compounds you create become useless.

Please invite detractors and claimants to the circle.

Now it's your turn to speak.

Defendant: Your Honor. I will find the element "Oxygen" guilty in the trial today. My witnesses are enough for that. Since 1772, oxygen has been used only for burning substances. Its combustion products cause environmental pollution. Humanity, nature, is suffering. In addition, some chemicals have complained to me several times, Mr. Judge, some of them are participating in today's court with their pains, please hear the words of the plaintiffs and make a conclusion [17-18].

carbon (II) oxide: I is formed from incomplete combustion of coal. Humanity has given me the name of is gas, that is, poisonous gas. Humanity can pass out or even die as a result of breathing from me for a long time. I wouldn't be in this situation if copious amounts of oxygen reacted with the charcoal [19-20].

- aluminum oxide: Oxygen is to blame for making me passive, Your Honor. My metal quickly binds to aluminum and forms an oxide film. I always need water.

- nitrogen (I) oxide: I am very upset that I have formed a compound with the element oxygen. Because there is no question that if there are human beings wherever I am, they will laugh at me, and then I will get angry and bring them to destruction.

- magnetic ironstone: Look at my condition, I am slowly decaying under the influence of oxygen and external forces. Humanity cannot use me effectively.

- potassium chlorate: The judge made me an oxygen explosive. I am always a danger to humanity.

Detractor: The Honorable Judge has also made the oxygen element carbon, (II) oxide and nitrogen (I) oxides into indifferent oxides. They are oxides that do not form salts.

Judge: Are the opinions of the witnesses who were called "oxygen" correct, do you confess your guilt?

Oxygen: Yes, all the arguments given are correct.

After examining the opinions of the defendants and witnesses in the trial over the chemical element "Oxygen", the court concluded as follows:

decision was made:

1. Let's study the properties of compounds formed by oxygen with sulfur, sodium, and magnesium substances.

2. In order to prevent the corrosion of iron, chemical compounds should be prepared and studied experimentally.

3. In today's trial, the xylorod element should be found innocent and its effective use should be studied more thoroughly.



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