

THE USE OF MODERN EDUCATIONAL TECHNOLOGIES IN TEACHING THE TOPIC OF "SALTS"

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ANNOTATION

Innovative educational technologies for studying the topic of "salt" in chemistry teaching suggest that when using interactive methods, students' activity increases and interest in learning activities increases, communication skills and a positive attitude to the topic under consideration are formed.

Keywords: innovation, innovative education, didactic game.

INTRODUCTION

Today, in the education system, the new principle of acquiring knowledge works very well with the use of various types of modern innovative educational technologies. At the same time, the use of new teaching methods effectively affects the development of intellectual, free thinking of pupils, the desire to justify their opinions, the ability to listen to the opinions of others, strive to solve problems, creative and moral progress.

When a teacher uses teaching methods in the educational process, it is important, first of all, to know the role of using this method, its effectiveness. To do this, each teacher must have life experience, be armed with sufficient knowledge, be able to anticipate solutions to problems in relation to pupils and be able to bring them to pupils.

When using innovative educational technologies and interactive methods in the educational process, pupils' activity increases and their interest in learning activities increases, communication skills and a positive attitude to the topic under consideration are formed.

The effective result of any lesson depends on the lesson project prepared for it. The more consistently it is structured, the more effective it is. The ability to apply any tasks, pedagogical techniques, didactic games on the spot depends on the skill of the teacher. Thus, we would like to recommend a lesson - project-presentation of the topic of "salt".

METHODS AND MATERIALS

We consider it expedient to use the following methods to explain the topic of "salt" most fully to 7th class pupils who are just beginning to get acquainted with chemistry. In accordance with this, in the organizational part of the lesson, pupils are divided into groups:

Group 1: "Basics"

Group 2: "Oxides"

Group 3: "Acids"

Group captains are selected and they give brief information about their groups. The scores received by the groups are evaluated using flashcards.

The completed topic is supported by the following quick questions, by the "Blitz request" method:

1. What is the formula used to determine table salt?
2. Which salts belong to NaHCO_3 ?
3. How many basic types of salts are divided into?
4. What is the valence of the Na in the NaCl salt?
5. Why is more used for NaCl?
6. What is the name of the acid residue in potassium fluoride?
7. What are the main salts that contain additives?
8. What is the name of potassium permanganate for use in marriage?

Whichever group answers these quick questions, becoming the first, they will be awarded "well done" cards. After that, a new topic and plan are written on the board. Pupils write down these topics and plans in their notebooks. Since the preparation for the topic is given as homework, there is an active participation of pupils in the lesson.

RESULTS AND DISCUSSION

When a lesson plan is given, the questions of the plan are weighed by the group members reading one by one, and they find answers to these questions in agreement with their group. The answers are pronounced and interpreted by the reader on the board.

Group 1 Basics: outlines a plan for "salt extraction":

Salts can be obtained in various ways. The table below shows the methods for obtaining salts.

Substances	Metals	Basic oxides	Bases (alkalis)	Salts	Nonmetals
Nonmetals (except O_2)	1	—	10	14	—
Acid oxides	—	6	8	12	—
Acids	2	5	7	11	—
Salts	3	—	9	13	14
Metals	—	—	4	3	1

They try to cover the topic based on the reaction equations given in the textbook.

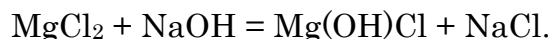
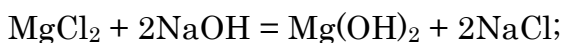
Group 2: Dry oxides describe a plan of "physical properties of salts":

Salts are solids of different colors of crystal structure with different solubility in water. Salts may contain crystallization water.



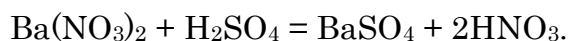
Group 3: dry acids describe a plan of "chemical properties of salts": salts are chemically active substances and undergo many changes.

1. Salts interact with alkalis: a new salt and a new base or base salt are formed:

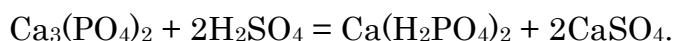


2. Salts interact with acids:

A new acid and a new medium salt are formed:



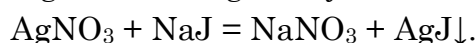
Acidic and medium salt is formed:



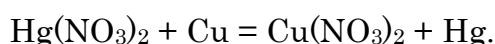
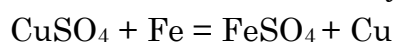
Only acidic salt is formed:



3. Salts interact: new salts are formed, and if a salt with poor solubility is formed, these exchange reactions go awry.

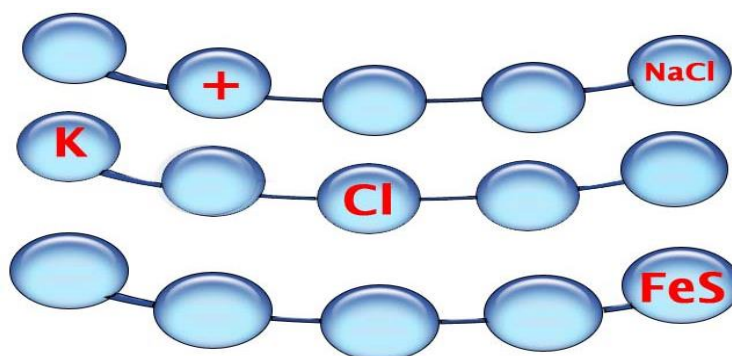


4. Salts interact with metals: a new salt and metal are formed. Metal ceramics each metal standing in the row of activity displaces the metal to its right from its salt, but cannot displace the metals to its left from its salts. Metals to the left of magnesium (Li, K, Ba, Ca, Na and B.) are not used to displace metals from salts due to their ability to react with water.



5. Some salts decompose when heated: $\text{CaCO}_3 \rightarrow \text{CaO} + \text{CO}_2\uparrow$.

After the groups have explained the new topic, the Teacher finishes the topic and expresses his additional thoughts. Then the next "chain reaction" game is held in order to consolidate the new theme.



After this game, the next game "wonderful ring" is held to remember the names of the salts.



In this game, the names of salts are written in rows, starting with these letters. Pupils' responses to these games, verified by the teacher, are evaluated. Questions are asked about

how pupils have areas they don't understand on a new topic. At the end of the lesson, the winning group is determined by counting the cards with pictures that fell out of the groups. Pupils actively participating in the lesson will be explained, appreciated, and pupils will be encouraged.

CONCLUSION

Summing up, we can say that the use of such methods as modern educational technologies - "blitz request", "chain reaction", "wonderful ring" in teaching the topic of "salt": leads to the formation of pupils' skills of independent thinking, the ability to be friends with friends-to joint teamwork, the skill of free behaviors.

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