

## CLASSIFICATION OF CHARACTERISTICS AND CHARACTERISTICS OF THE CHEMISTRY LESSON

Nishonov Mirkozimjon

Professor of chemistry department of Fergana State University, candidate of technical sciences

<https://doi.org/10.5281/zenodo.10358559>

**Abstract.** *In this article, the types and characteristics of chemistry lessons used in practice are analyzed, and the theoretical and practical issues of their classification based on the structure, content and modern approaches of the current chemistry teaching process are highlighted.*

**Keywords:** *teaching process, structure, content, teaching chemistry, types of chemistry lessons, classification, improvement.*

The use of different types of lessons depending on the content and didactic goals of the lessons provides an opportunity to effectively organize the educational process, to use the time and activities of teachers and students effectively.

A lesson is a complex pedagogical object. According to modern concepts, classes are classified according to didactic goals, educational methods, organization of students' activities, educational content. Among them, the most used is a mixed lesson. This type of lesson has long been recognized and used as the main type of school chemistry. Mixed lesson is a universal type of lesson that covers all processes of mastering.

A good result can be achieved only if mixed lessons are planned and organized rationally, each lesson is conducted depending on the content of the studied material, the availability of educational tools, the readiness and level of students. If the mixed lesson is closely related to the topic of the previous lesson, the lesson can be started by checking the knowledge and skills of the students on the material of the previous lesson.

New material should be studied and completed mainly and directly in the course of the lesson. About 30 minutes should be allocated to study new material. In mixed classes, homework should be assigned after learning new material, before reinforcement (homework should not be left until the end of the lesson, when the students' attention is waning).

The purpose of consolidating new material is to be satisfied that the material has been largely mastered. If we assume that theoretical knowledge increases in the content of chemistry courses, it is appropriate to strengthen and complete it in the process of learning new knowledge. A mixed lesson combines different types of lessons. The teacher should decide what kind of lesson to use in the mixed lesson and plan its elements.

In addition to traditional mixed classes, we can also implement various combination classes. For example, if a mixed lesson has two didactic goals (testing previously learned knowledge and skills and mastering new knowledge), its approximate structure can be as follows:

1. Check whether the homework is completed by students: a) that the task is completed correctly, completely and in order; b) content and results of the performed task.
2. Verification of previously acquired knowledge: a) by the method of public conversation; b) individual oral inquiry; c) short written or test-type assignments.
3. To inform and justify students with the subject, purpose and task of the lesson.
4. Learning and mastering of new material by students.

5. Generalization and systematization of knowledge. Summarizing the lesson and giving homework.

The structure of a mixed course, aimed at acquiring new knowledge, skills and abilities, and applying them in practice, can be as follows:

1. Restoration of basic knowledge, skills and competencies.
2. Explaining the topic, purpose and tasks of the lesson, justifying the exercises.
3. Learning new material (rules, regulations) and mastering by students.
4. Initial application of acquired knowledge (test exercises).
5. Acquisition of skills and competences (practice according to examples, instructions and tasks; creative tasks).
6. Independent works related to the creative application of knowledge.
7. Completion of the lesson.

The introductory class is usually held at the beginning of the new course, at the beginning of the academic year. The purpose of a reading lesson is to engage students in learning a new course. In introductory classes, students are introduced to new course content based on their previous knowledge.

In this lesson, the teacher introduces the methods of learning a new course (observation, working with tables and textbooks), basic educational tools (textbook, tables, periodic table, chemistry notebook). Also, students will be informed about some organizational issues (how to prepare for class, student's tasks in learning new knowledge, tasks, independent and practical tasks).

Introductory lesson also aims to arouse students' interest in the studied course, its content, chemical knowledge, and clarify the practical importance of the course. Introductory lessons are often considered to belong to the lesson of learning new knowledge, because these two types of lessons have something in common.

The lesson of learning new knowledge does not necessarily have an element of testing the knowledge and skills of students. The lesson is devoted to the study of a large volume of complex material that requires detailed explanation by the teacher. The main purpose of such a lesson is to provide students with new knowledge.

If the studied material requires the use of various sources of knowledge, educational tools, the content of the material is complex, it is appropriate for the chemistry teacher to choose such a lesson. This type of lesson is used when introducing major topics (starting a new major topic), at the beginning of a quarter, when studying topics that involve complex patterns, such as the course of reactions. The illustration-explanatory method is mainly used in the lesson of learning new material. Knowledge sources (pictures, tables, forms and various didactic materials) are widely used in explaining the material. In order to consolidate the educational materials, students are required to restore their previous knowledge, perform tasks that develop students' knowledge, and perform certain independent tasks.

The structure of such a lesson can be approximately as follows:

1. The main purpose and task of the lesson;
2. Organization of cognitive activities of students in the process of learning new material;
3. Completion and consolidation of knowledge by parts - logical sections;
4. Giving assignments that require the application of the learned material;
5. Submit homework.

Organizing and conducting a lesson in the form of learning new knowledge requires a lot of preparation, responsibility, skill and creativity from the teacher. Because in such classes, it is necessary to attract the attention and working ability of students for a long time, to skillfully reveal the main features of the studied substances and phenomena, to update the teaching methods of the materials. One of the lesson options for learning new materials is a school lecture, which is used in upper grades.

The lecture is one of the types of presentation and explanation of the educational material, and requires systematic, consistent, scientifically based, appropriate conclusions. Modern school lecture. in addition to serving as a source of new knowledge, it also takes on the tasks of preparing students for independent work, forming methods of mental activity.

The lecture class can be divided into an introductory lecture, a general lecture and a final lecture according to didactic purposes. An introductory lecture usually covers the important theoretical issues, main ideas and concepts of the course and the major unit.

It is also possible to consider and solve some problematic issues in introductory lectures. Problem solving in introductory lectures leads students to independent research. This type of lecture requires the application of various methods, such as summarizing, providing evidence, involving students' existing knowledge, connecting intersubjective connections.

Generalized reports are used to summarize large topics.

A summary report differs from an introductory report in that more emphasis is placed on description combined with analysis and conclusion. In the generalized lecture, mainly - the facts, which are important and interesting for the students, to the problematic issues. it is appropriate to pay special attention to it. Generalized lectures are mainly used in studying the materials of general chemistry courses.

In chemistry courses, a final lecture is sometimes used. The task of the final lecture is to systematize and conclude the knowledge learned in the general inorganic organic chemistry course or its major section.

Some experts are also using lecture-seminar systems of lessons in their schools. One-hour lecture-seminar classes can consist of: lecture class, independent work class and test classes.

The purpose of the lesson of formation of skills and competences is the formation of chemical skills and competences related to the assimilation of theoretical knowledge, their consolidation and application. Therefore, this type of lesson is sometimes called a lesson for strengthening knowledge and building skills.

The main activity of the students in the education and skills training class is to perform certain practical tasks. Such a lesson should ensure the formation of basic knowledge and basic skills that students need to master, which are indicated by a separate rubric in the program.

Chemical skills and competencies are formed over a long period of time. Some of the necessary skills and qualifications are formed in the process of theoretical and practical activities of students in "mixed classes" and "lessons for learning new knowledge". Therefore, practical work and laboratory experiments are carried out depending on the lesson.

Practical work is done during reinforcement after learning new material.

A certain amount of practical work can also be carried out when checking the materials learned in the previous lesson. In this, students strengthen their knowledge and skills with experiments such as studying chemical phenomena, obtaining substances and studying their properties.

Practical work in the lesson of skills and competence formation is divided into two: educational and final practical work. Educational practical work is organized in order to teach any type of educational work, to strengthen knowledge, to form various skills.

A lesson on the formation of skills and competences can consist of the following elements:

1. Determination of the educational goal.
2. To introduce students to reagents, equipment and ways of using them, necessary for practical work.
3. Mastering the methods of educational work, giving instruction on formalizing the results of practical assignments by students (the main part of the lesson).
4. Completing the work done.
5. Giving homework.

Be a teacher of practical work and success in student activities. It depends on the skills and preparation of students: comparing, comparing, making calculations, describing and describing on the basis of a plan, determining interdependence, working with knowledge sources.

Final revision lessons are held in order to gradually systematize and complete the students' knowledge. The task of the revision lesson is to restore and systematize previously acquired knowledge, skills and educational methods. Conclusion - consists in determining the generality of a number of studied objects and events.

The final review lessons are of great importance for students' assimilation of theoretical knowledge in chemistry courses, deepening and consolidation of acquired knowledge.

Summarizing and summarizing knowledge is important in systematizing certain knowledge in chemistry courses and in understanding the essence of chemical phenomena. Therefore, it is advisable to conduct final review lessons - at the end of each chemistry course, after the major sections have been studied.

The main features of the final revision classes are the acquisition of new knowledge by understanding, systematizing and completing previously acquired knowledge. The following conclusion can be drawn from the above: each chemistry lesson should have its own structure. In general, each chemistry lesson mainly consists of three parts:

1. The beginning of the lesson - introducing students to the purpose and task of the lesson.
2. The main part of the lesson is solving certain educational tasks.
3. In the final part of the lesson, the conclusion is made and homework is assigned.

## **REFERENCES**

1. M.Nishonov. Methodology for studying chemical processes occurring in soils.- Science and innovation, 2023 том 2 номер Special Issue 6 страницы 236-242
2. M. Nishonov, N. Holiqova. The importance of using educational resources in independent learning of chemistry. Scientific newsletter of Namangan State University. Namangan 2022. No. 3, pp. 80-83.
3. M. M. Yunusov, M.Nishonov. Studying the Efficiency of Teaching the Chemical Technology Course Using Information Technologies. Eurasian Journal of Learning and Academic Teaching, (2022). 13,33–38.
4. M.Nishonov, Sh.Mamajonov, V.Xujaev – Kimyo o'qitish metodikasi. Toshkent: O'qituvchi, 2002.

5. М.Ф. Нишанов, АА Хайдаров, Д.М. Мирзаев - Значение изучения среды раствора при профессиональной подготовке студентов направления «Пищевая технология». Журнал Universum: технические науки, 2020 Номер 10-2 (79) Страницы 92-94
6. M. Nishonov, S Mamajonov, D Tojimatov -Methodological significance of studying the migration of microelements in water and soils. American Journal of Applied Science and Technology, 2022 Том2 Номер07 Страницы10-14
7. М.Нишонов,С.Тешабоев.Мактабда кимёдан амалий ишлар. - Т.: Ўқитувчи, 1992,134 бет
8. M Nishonov, Sh.A. Mamajonov, D Tojimatov -Methodological Significance of Studying Chemical Pollution of the Environment by Microelements.Eurasian Research Bulletin, 2022 Том10. Страницы 55-58.
9. M. Nishonov, Sh.A. Mamajanov . Improving the Structure and Content of the Course" Methods of Teaching Chemistry" in Higher Education.Pedagogical Education, 2004.
10. M.Nishonov, T.Amirova. Integrative description of the science of chemistry teaching methodology with didactic analysis.- Science and innovation, 2023 том 2 номер б6 страницы 245-248
11. M.Nishonov. Methodological significance of studying the transfer of dissolved microelements through soil solution.- Science and innovation, 2023 том 2 номер special issue 6. страницы 64-68