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**INNOVATIVE METHODS FOR STUDYING THE INFLUENCE OF
EDAPHIC ENVIRONMENTAL FACTORS ON PLANT LIFE
ИННОВАЦИОННЫЕ МЕТОДЫ ИЗУЧЕНИЯ ВЛИЯНИЯ
ЭДАФИЧЕСКИХ ФАКТОРОВ ОКРУЖАЮЩЕЙ СРЕДЫ НА
ЖИЗНЕДЕЯТЕЛЬНОСТЬ РАСТЕНИЙ**

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RESUME

The effective use of innovative technologies in teaching the subject is aimed at fostering the spirit of citizenship among students, developing their worldview, broadening their horizons, and improving their knowledge.

РЕЗЮМЕ

Эффективное использование инновационных технологий в преподавании предмета направлено на воспитание у обучающихся духа патриотизма, развитие их мировоззрения, расширения кругозора, а также совершенствования их знаний

Keywords: *innovative technologies, visual AIDS, individual abilities of the student, integration, collective abilities, information, distance learning, developing.*

Ключевые слова: *инновационные технологии, наглядные пособия, индивидуальные способности студента, интеграция, коллективные способности, информация, дистанционное обучение, развитие.*

The Law of the Republic of Kazakhstan «On Education» States that «the main task of the education system is to create the necessary conditions for obtaining education aimed at the formation, development and improvement of professional skills of the individual on the basis of the values of national and universal society, achievements of science and practice».

Today, changes in the country's educational systems and government resolutions require linking knowledge with life, improving the quality of education, and educating a well-rounded generation. In order to enter the World educational space, a new education system is currently being created in the country. This process requires, along with making specific changes to the educational work of the theory of pedagogy, a new approach to the educational activities of various areas taking place

in the country, differentiation of achievements, improvement of the creative potential of students, orientation of teachers to the scientific direction, and a new organization of activities.

In the country's strategic program «Kazakhstan – 2050», one of the main goals is to educate highly developed intellectual youth and promote their potential. Therefore, the teachers have a very big task. Today, one of the most effective concepts of the discipline for the younger generation is the basics of innovative technologies.

The word «innovation» is a term that is currently used in all industries, medicine, and technology. Now this word means «new, changing, new», that is, in the modern era there is a need for «new, new change». On the basis of this method, it is assumed to increase the cognitive activity of the student through the formation of individual abilities, activity, and independent use of educational material. The features of this are mainly as follows [2]:

- development of student activity;
- creating a harmony of learning and learning;
- to develop the student's ability to learn independently right here;
- the ability to identify the active participation of the student in the cognitive process;
- influence on perception, perception of emotions, using more visual AIDS.

Innovations, on the one hand, change the methods of work of the teacher, the relationship of the teacher and the student, games, on the other hand, and turn into a philosophy of practical activity.

New methods of training are the teacher's skillful development of innovative technologies, sustainable care for its use, and «multi-functional weapons» that require modification.

Innovative learning technologies-improving students' abilities to the educational process on the basis of personal-oriented, integration, collective abilities, information, distance, developmental, and other technologies.

Johann Wolfgang von Goethe says: «Knowing is not enough; we must apply. Willing is not enough; we must do». Thus, a modern teacher should be not only theoretically armed, but also supportive, able to teach the student to apply knowledge in life, constantly in search, and most importantly-a teacher who can think [4].

In the course of innovative training, the student learns to be active, form their own opinion, correctly Express their thoughts, argue their point of view, conduct discussions, listen to others, respect and communicate with them. The creation of a modern education system and the introduction of innovative forms and methods of training places high demands on the personality and professional competence of teachers [5].

The above types of innovative technologies in modern conditions are very effective for use in the educational process of the University. It does not damage the content of training defined by state standards of education, and allows you to achieve the goals specified in the curriculum of academic disciplines, in unity with the

already established methods of training. Currently, a new education system is being created in a sovereign country that is focused on entering the world educational space. This is due to significant changes in the educational process. Because the educational paradigm has changed, the content of education is being updated, new views and new relationships are emerging. One of the important problems in the upbringing and education of the younger generation is mastering the scientific and pedagogical foundations of innovative activity of teachers.

New innovative training technologies are a special type of professional activity. For the development of innovative technologies of training is necessary to mobilize a great educational experience. This is a job that requires a person who is creatively suited to their work, who has well-known personal business qualities. In fact, each teacher is self-forming and self-forming in the process of developing new innovative technologies [6].

The main tasks of the new innovative pedagogical technology at the University are: obtaining knowledge, development, purposeful organization of each student's activity; education to the extent that a reference point is chosen that corresponds to knowledge and knowledge; formation and development of skills for independent work; development of analytical thinking. Based on these tasks, we will consider the methods of innovative technologies that are effective in studying the topic «the influence of Edaphic environmental factors on the vital activity of plants».

In the process of working with the support scheme «Soil layers» (fig.1) using the necessary words: humus, parent material, topsoil, bedrock, subsoil. Describe the picture (fig.2, fig.3) development of innovative knowledge, introduction of changes, implementation of new pedagogical ideas. We must pay special attention to the fact that the student is a person who is looking for education on their own.

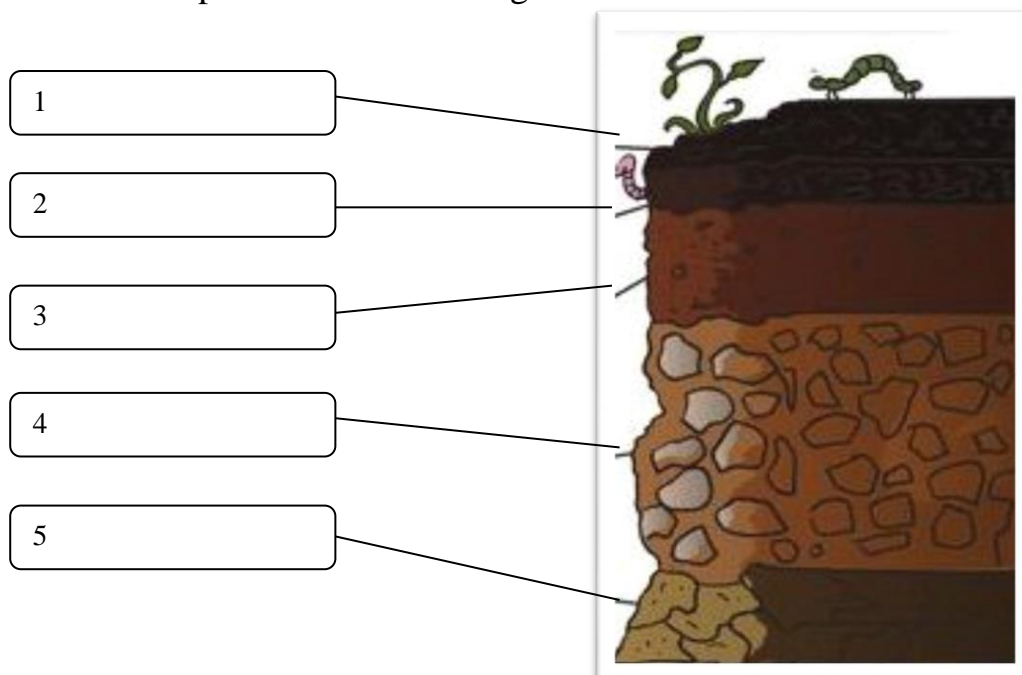


Figure 1. Scheme «Soil layers»

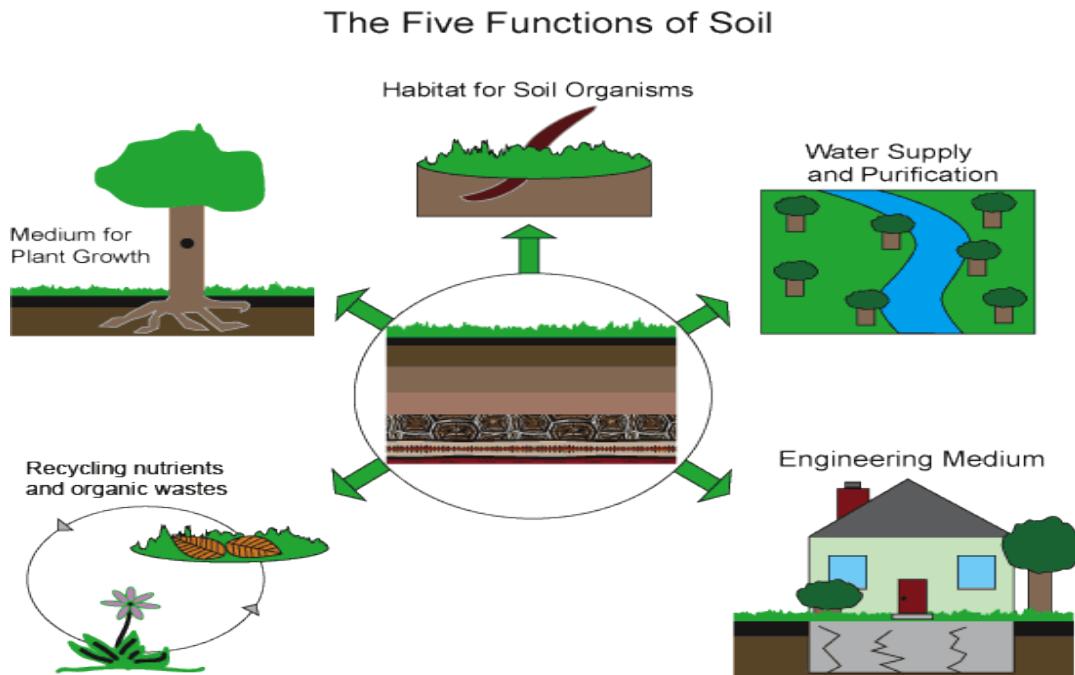


Figure 2. The five functions of soil

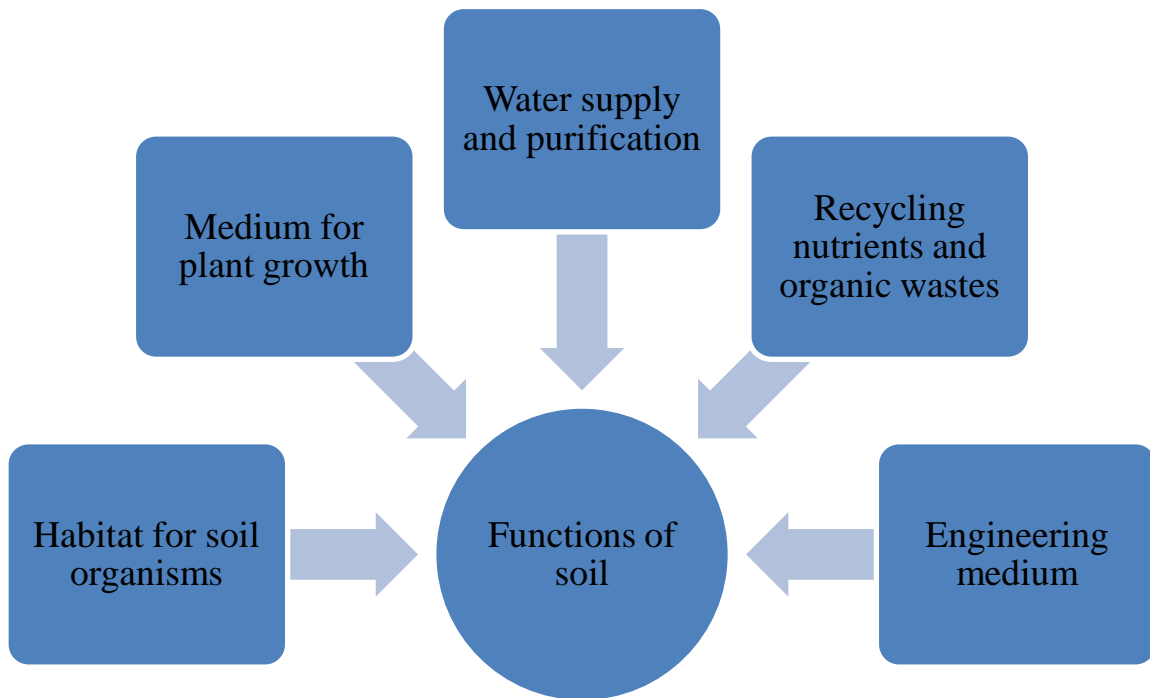


Figure 3. Functions of soil

Soil and plants are in constant interconnected metabolism, if there is no metabolism in the media, neither in plants nor in the soil. Some plants grow only on certain soils, so they are called plant indicators [7]. Task of identifying soils types and chemical composition (table 1).

Table 1- Identification task «6 types of soil»

Soil	Feel	Composed of	Location	Other
Sand				
Clay				
Silt				
Peat				
Loam				
Chalk				

Results of innovative technology: help to reveal more deeply the specific essence of the topic using various methods. Allows you to attract all students to classes. At the same time, students' abilities, freedom of communication, organization, and creative activity increase. Development of personal qualities, development of creative potential, formation of professional self-confidence.

As noted by the Russian teacher K.D.Ushinsky: «In accordance with the requirements of modern times, every teacher, improving their knowledge, uses innovative technologies in accordance with new requirements, and not the old monotonous lessons».

Therefore, keeping up with scientific and technological progress, the ability to timely accept, process and effectively use new pedagogical innovations is the main task of every teacher. In our opinion, it is necessary to introduce a system of innovative management in educational institutions and implement it.

Having studied, studied and analyzed new innovative technologies for improving the quality of education, we can draw the following conclusions:

- it offers a variety of new innovative technologies to improve the quality of knowledge, skills and abilities of students, the choice and conclusion from it depends on the professional competence of the teacher;
- success can be achieved only when the introduction of new innovative technologies is carried out systematically and purposefully;
- when introducing new innovative training technologies, a large obstacle is created by the lack and non-compliance of the material and technical base of each educational institution with modern requirements, and low personnel potential.

Thus, the effective use of innovative technologies in teaching the topic is the goal of educating students in a civic spirit, developing their worldview, expanding their horizons, and improving their knowledge.

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