

7TH GRADE ZOOLOGY IN THE DEPARTMENT OF "SIMPLE ANIMALS" LEARNING USING MODERN ELECTRONIC RESOURCES.

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Annotation: The use of pedagogical, modern information technologies has been identified as an important task in improving the effectiveness of the teaching process in the education system. This article discusses how to increase students' interest, knowledge and thinking in the use of modern electronic resources, ICT, multimedia, interactive methods, pisa assignments, QR CODE and quiz, IQ tests in 7th grade zoology classes in secondary schools. Today, the use of electronic resources is becoming a modern requirement. We live in an era of rapid growth of scientific knowledge. From the point of view of system analysis, the educational process in secondary school and scientific knowledge is complex, infinite, interconnected systems, and the educational process is included in the system of scientific knowledge. Therefore, the rapid growth of scientific knowledge will inevitably increase the naturalness of the learning process and the quality and efficiency of the learning process. The use of interactive methods allows students to interact, work collaboratively, and think. Students will also be interested in science videos, including the use of computers in zoology classes, the use of various technological methods, and videos showing the animals' habitats, distribution, movement, and nutrition.

Keywords: pisa, quiz, IQ, QR CODE, interactive methods, prostheses, amoeba, cyst, foraminifera, diarrhea amoeba.

In today's educational process, teachers need to be able to quickly find information, use a variety of methods, and apply them in order to engage students in the lessons and provide them with up-to-date knowledge. In modern education, the use of computer-based teaching methods in information and communication technologies (ICT) develops students' independent thinking, creative abilities, presentations (slides), multimedia, animation, video lessons, audio information, pizza tests. Another innovative technology that can be used in the classroom is interactive methods (organizers), such as cluster, video puzzle, brainstorming, Venn diagram, test and biological dictation, T scheme, insert technology, BBB method, fish skeleton. Through the use of these methods, students will be able to understand the essence of the topic and memorize it.

The following methods can be used in the 7th grade zoology classes of general secondary schools on the topic of generalization in the section "Simple animals".

Course Title: Generalized lesson on simple animals.

Course Objectives: To acquaint students with the peculiarities of simple animals, their representatives, distribution, life, physiology, internal and external structure, digestion, respiration, metabolism through modern technologies, methods, interactive games, knowledge consolidation, independent work on the textbook develop skills.

Equipment and technologies used in the lesson: computer, projector, slides, videos, tables, handouts.

Course:

1. Organizational part.
2. Students are introduced to the topic, purpose, and course of the lesson.
3. The new topic will be explained through electronic slides, pictures, videos.

Summary of the subject:

The unicellular body is made up of a single cell that is able to live independently. They are the vacuoles of digestion and digestion, the organelles of movement, and in the cell will be the nucleus.

Protozoa are the simplest single-celled organisms. Simple amoebae were considered their typical representative. The amoeba lives at the bottom of the pond, which is polluted with fallen leaves and weeds.

Body size 0.2-0.5 mm, transparent. The shape of an amoeba cell is constantly changing. Like other cells, the amoeba's body is made up of a thick substance called cytoplasm. The cytoplasm contains a single nucleus and cell organelles. The cell membrane separates the cytoplasm from the external environment. Amoebae feed on bacteria, algae and organic waste. The amoeba breathes in oxygen dissolved in water. Some of the effects can be seen in the shape of the amoeba's body. Amoebae reproduce asexually by dividing into two. Foraminifera and siliceous (sand) skeletal structures are common in marine limestone. Some false limbs are dangerous parasites.

Let's study the Khivchins by the example of green euglena. Khivchins are single-celled animals whose bodies are covered with a hard shell. A typical representative of them is the green euglena (Fig. 6). They are moved using one or more cilia. The green euglena lives in ponds and pools. It is very small, 5-10 times smaller than an amoeba. The body is flattened, with a narrow anterior and posterior sides. It twists the screw like a screw and pushes it forward. The Euglena cell has a permanent shape due to its hard and flexible thin shell cover. Euglena's cytoplasm contains a large nucleus, a contractile vacuole, and a red-spotted "eye." The cytoplasm of Euglena contains chromatophores in the form of green bodies. Euglena, like an amoeba, breathes in oxygen dissolved in water. Euglena reproduces asexually by dividing like an amoeba.

Class of infusoria. The body of the infusoria has large and small nuclei covered with eyelashes. Digestive and digestive organoids are more complex than other single-celled organisms. Infusoria were first found in hay bales. The word "infusoria" also means "animals of hay fever" in Latin. Let's look at infusoria in the example of shoes. Tufelka is found in ponds with a lot of plant debris. It is 0.1-0.3 mm long and has a body shape similar to the bottom of a shoe (Figure 9). That is why this animal is called a shoe. The outside of her body is covered with a lot of lashes. Due to the vibration of the lashes, the shoe floats forward with a blunt side. Tufelka feeds on bacteria. Oxygen enters the cytoplasm of the shoe along with water. Asexual reproduction begins with the dissolution of the nuclear envelope and the splitting of the nuclear material. At this point, the body of the shoe becomes thinner in the middle. The newly formed nuclei pass in equal amounts to the front and back of the shoe. The body of the shoe becomes thinner and splits in two, forming two infusoria from one infusoria.



Watch a video on the subject!

Several methods are used to monitor students' knowledge of a new topic.

Methods used:

1. Through the Venn diagram, similarities and differences are found by comparing amoebae, euglenids, and shoes.
2. Method of analysis and synthesis method.
Spring water was poured into the first of the two flasks, boiled water was poured into the second, and an equal amount of amoebic liquid was added. A week later, it was discovered that amoebae had multiplied in the spring water, and in the second tube, they had died.
Explain the essence of this experience.
3. Pisa assignment.

Some members of the Khivchin class are adapted to parasitic life, such as leishmaniasis. Leishmaniasis is found in some parts of southern Uzbekistan and in tropical countries, and causes chronic wounds on the face and sometimes on the skin of the hands



1. Identify the organisms that cause leishmaniasis.

- A. Trypanosome
- B. Amyoba
- C. Leishmania
- D. I don't know

2. Find the correct answer for a disease characterized by purulent ulcers on the skin (leishmaniasis).

- A) Distributed by Khivchins.
- B) Distributes tapeworms.
- C) From time to time the body temperature rises.
- D) Occasional abdominal pain

3. The carrier of this disease -?

- A. House pasha
- B. Se-se mosquito
- C. Ordinary mosquito
- D. Iskaptopar mosquito.

4. Perform biological dictation using the method of "mental attack".

- 1. Where was the infusoria first found? ----- From Pichan ivitmas.
- 2. Where does the shoe live? ----- Plant remains in a lot of water.
- 3. The length of the body of the shoe? ----- 0.1-0.3 mm
- 4. How many types of single-celled organisms are there? ----- 40,000
- 5. The most complex single-celled organisms? ----- Infusoria.

After completing these tasks, students exchange ideas and answer questions. Students who actively participate in the lesson will be encouraged and the lesson will end



Pictures from the lesson process.

Conclusion:

In conclusion, it can be said that this topic was covered in the 7th grade in specialized and regular classes. In the 7th grade, which specializes in zoology, a lesson was organized using a computer, lesson videos, presentations, and pictures. To reinforce the lesson, an equal number of subgroups were divided, using interactive methods, such as a Venn diagram, handout questions, and the lesson was conducted in the form of

a competition. Dividing the lesson into small groups in the form of competitions not only developed the ability of students to work together and use each other's ideas, but also increased the interest of students in the lesson, and the topic was well received. Grade 7 g students were traditionally read a simple topic, with the past and new topics being taught to the students as they talked about the topic. This has led to a relatively low level of interest in the lesson, neglect and boredom. This means that teaching students using a variety of interesting methods increases the effectiveness of reading.

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