

WATER – IMPORTANCE, USES AND PROTECTION MEASURES



Before starting the lesson, students receive a fact sheet with the importance of water on the human body.

Lesson no.1 – The importance of water

Activity 1

Time: 25 min

Type of activity: free discussion on the role of water on the human body.

Class organization: class discussion

Actions: The teacher specifies the sources of origin, the properties of drinking water (colorless, tasteless, odorless), examples of foods with high water content (milk, fruits, vegetables, meat) and the role of water for the human body (helps eliminate toxins , helps the body absorb and transport nutrients, etc.). The teacher emphasizes the need for daily consumption of approximately 2 l, because in case of high water loss the body can lead to disturbances or sometimes death. It should also not be overlooked that water is the raw material in the production of many foods. There is practically no life without water.

Tasks: The teacher asks the students to take notes.

Activity no. 2

Time: 9 min.

Type of activity: video presentation "Virtual water", explaining the concept of virtual water, its need.

www.youtube.com <https://youtu.be/ca3fBBiz-3U>

Class organization: the whole class The teacher asks the students to fill in an activity sheet, the amount of water needed to carry out various household activities. Students complete the activity sheet with the main household activities in which water is used.

Activity no.3

Time: 15 min Type of activity: filling in a worksheet

Class organization: group work
Actions / Tasks: The teacher asks the students to calculate each (depending on their own body weight), the amount of water needed in 24 hours, to have a healthy lifestyle, taking into account that the need for water for each body weight in the elderly is 35 ml and 50-60 ml / kg body weight in children. The teacher asks the students to present the results obtained by them.

Lesson no. 2 – The uses of water and its circuit in nature

Activity no. 1 Time: 20 min Type of activity: Discussion

Class organization: the whole class

Actions: The teacher specifies to the students other uses of water than the one used for food purposes. The purpose of this activity is to highlight the importance of water in other areas of activity, such as: agriculture, plant irrigation, animal husbandry; industry, at different technological processes, obtaining electricity, producing steam used as a thermal agent; pisciculture; extinguishing fires; transport and tourism etc.

Activity no. 2

Working time: 20 min

Type of activity: Completing worksheets and discussion
Tasks: The teacher divides the class of students into 6 groups, and each group will choose its leader and will receive 2 documentation sheets: 1 sheet with water uses and another with information about the hydroelectric plant at the Iron Gates 1.

[Libertatea](#)> [News](#)> [News Romania](#)> [A sturgeon lift will be built at the Iron Gates 1](#)

Based on the information in the documentation sheets, students are asked to answer first in writing, and then orally, a few questions. The leader of each group will present the answers, the teacher will make the necessary corrections, if necessary, and then they will be written on the board.

Activity no. 3

Time: 10 min

Type of activity: explanation by the teacher of the water circuit in nature

Class organization: students will be divided into 4 groups.

Actions / Tasks: the teacher asks each group of students to choose a leader, who will have to consult their colleagues, to give the answer to the existing question in the worksheet he will receive, about the “Water Circuit in Nature”. The teacher will ask for the answers from each group leader and will establish their correctness.

Lesson no. 3 – The Danube Delta. Water saving methods.

Activity no.1

Time: 30 min

Activity type: watch movie "Danube Delta"

www.youtube.com <https://youtu.be/1B6dlPcMv8M>

Class organization: the whole class

Actions / Tasks: The teacher specifies the species of birds (seagull, footfish, heron, swan, common pelican, rooster, lizard, white stork, shore swallow, cormorant, etc.) that are found in the Danube Delta, and students are attentive and take notes . Activity no. 2 Working time: 11 minutes

Type of activity: watching the film "Water treatment methods and savings"

www.youtube.com https://youtu.be/ySv_GgjuZHs

Class organization: the whole class Actions / Tasks: The teacher asks the students to watch the video and specifies the main measures for the protection and saving of water (construction of wastewater treatment plants; not to throw and not to deposit on the banks or riverbeds waste of any kind; the execution of dam and construction works for dams; not to waste water; water recycling, etc.).

Activity no.3

Working time: 5 min.

Type of activity: completion of 2 activity sheets: 1 sheet, with the specification of the bird species existing in the Danube Delta and the second sheet with the specification of some measures of protection and water saving.

Class organization: students are divided into 6 groups, each group being represented by a leader, who will present the answer.

Actions / Tasks: The teacher distributes the activity sheets to the students and asks the group leaders to present the answers.

Activity no. 4

Time: 4 min.

Type of activity: announcing the topic Class organization: the whole class

Actions / Tasks: At the end of the class, the teacher proposes as a theme to the students to make the project "Water Filter", imagining that they are on a trip to the mountains near a river and have run out of water, but they have a first aid kit. The teacher states that the topic can be found in the manual of Technological Education and Practical Applications, ARAMIS Publishing

House, 2017 (page 15), after which he reads the requirements, the necessary materials and how to achieve it.

The materials needed for this project are: - PET glass, - Stones, - Fine gravel, - Sand - Active coal, - Cotton or gauze
How to make: Wash the stones and sand well and then cut the bottom of the PET bottle. Turn the bottle upside down and put the first layer of stones, then add a layer of cotton wool or gauze. Place the activated charcoal, over it a thicker layer of cotton wool or gauze, then a layer of sand, a layer of fine gravel, and a layer of cotton wool or gauze on top. Remove the stopper and collect the filtered water in another bowl. The water thus filtered must be boiled to be safe to drink. The project will have to look like in the image below:



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