


**FORMATION OF NATIONAL AND CULTURAL COMPETENCE TOPIC:  
TECHNOLOGY TO IMPROVE THE METHODS OF TEACHING PHYSICS  
IN HIGHER EDUCATION ON THE BASIS OF A COMPETENCY  
APPROACH (ON THE EXAMPLE OF TRAINING TECHNICAL  
ENGINEERS)**

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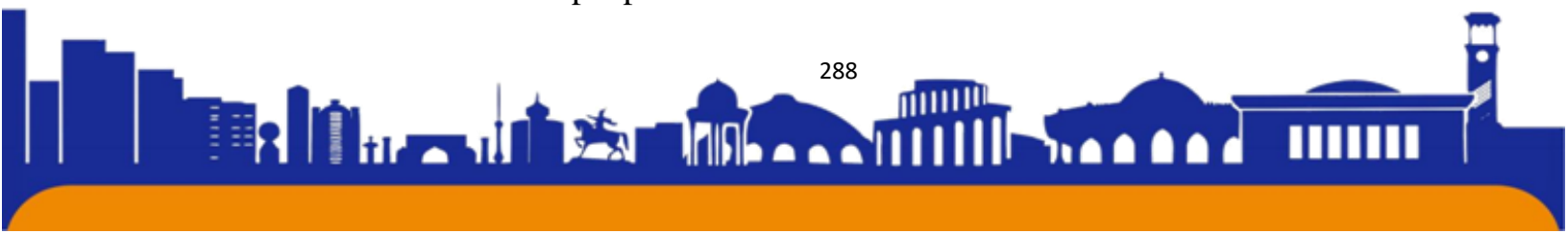
In strengthening the theme "Liquid and its properties", this competence is formed in the students by the constant temperature of spring water in winter and summer, its composition, feeding of fish living in the spring of dissolved minerals, in particular, the careful preservation of the rich heritage of our ancestors - the cultural and architectural complex "Chashma" in Nurata and following the rules of etiquette established there, kindness, generosity towards others, respect for the worldview, traditions and ceremonies of others.

2	What physical law was used to bring water to the Oqsaroy, built by Amir Temur in the fourteenth and fifteenth centuries, at a height of 38 meters.	
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Comment on the pictures provided.

**1. Mathematical literacy, the formation of competence**

They perform the physical processes that occur in solving problems on the subject and in everyday life, using the necessary formulas, following precise calculations. In doing so, they will have the ability to leave their home at what time they arrive at school without ringing the school bell, and to plan in advance how to dress for school based on weather data. They can also make personal, family and economic plans based on accurate calculations. They are able to use them effectively in life, being aware of the latest scientific and technical innovations that lead to favorable conditions for people

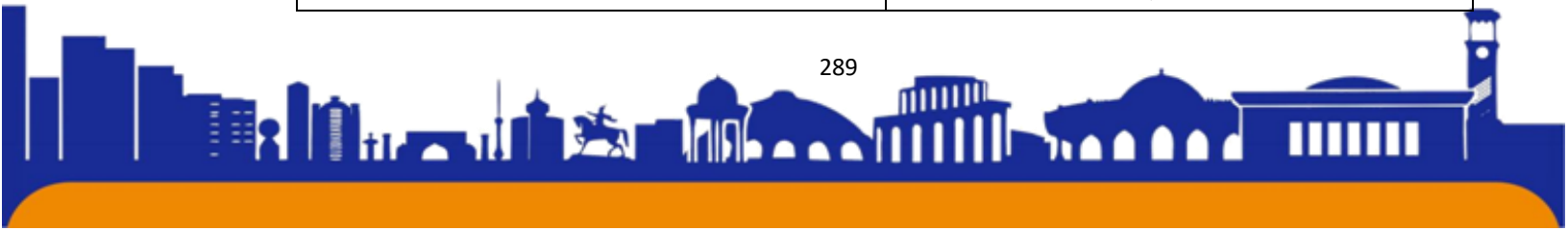


.	How many grains of rice are on average in one tablespoon? ( $\pm 25$ )	about 1100
.	What is the name of a device that combines the capabilities of a monitor, processor, keyboard, mouse, and several other devices on a personal computer?	Sensor
.	There are two 100-liter barrels. One is empty and the other is filled with water. Three different: 9-liter, 6-liter and 3-liter containers are provided. How can these containers be used to distribute 50 liters of water in each barrel?	By no means

**The formation of general competencies in physics in students can be done as follows.**

1. Observation, understanding, and explanation of Physical Processes and Events the topic of “Liquids and their properties” explains the phenomenon of evaporation and condensation through simple examples, such as fluidity, volume, crystalline state. The student uses knowledge, skills and abilities acquired in the properties of liquids in daily life, understands and explains the process. In particular: he or she understands and explains the state of aggregation of water, the importance of maintaining the stability of the earth's surface and the human body, the solubility properties of liquids, the process of technical use of liquids. In addition, the student observes, understands and explains the process of seasonal change in nature, the formation of snow and rain. In doing so, the student is able to articulate his or her point of view clearly and concisely orally and in writing, ask questions logically based on the topic, and work collaboratively as a team while adhering to a culture of communication. By observing this process, students learn throughout their lives, constantly increasing their knowledge and experience independently, and this competence is formed.

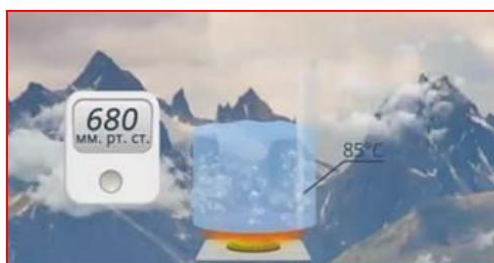
1. Is it easier to swim in clean water or in salt water?	Swimming in salt water is easy because salt makes the water much heavier.
2. If we put a watermelon first in a bath filled with clean water and	The volume of the overflow water varies, not the masses.



then in a bath filled with very salty (wet) water, what is the ratio of the masses of water overflowing from them?	
3. Which retains heat better: clean water or salty water?	In this case, the salty water cools faster.

**2. Conducting experiments, and drawing conclusions**

In the course "Liquid and its properties" students are taught about the volume, density, mass, heat capacity, formula, units of liquids and how to measure them. Topic reinforcement questions are given in order to measure, identify, and apply physical quantities in practice. Including: evaporation and boiling temperatures of water, the amount of hot water and cold water when filling the bath for bathing, the effect of relative humidity on respiration when declaring the relative humidity of the air in millimeters of mercury in weather data draws conclusions based on the knowledge, skills and abilities acquired by the student during the course. They can measure the required physical quantities using scales, thermometers, psychrometers, calorimeters.

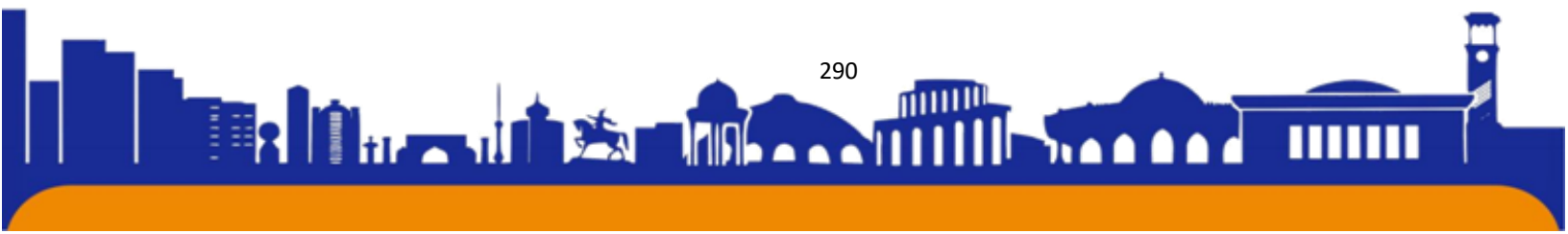


Conduct experiments, measure physical quantities and draw conclusions.

**3. Be able to use physical tools in practice**

The topic "Liquid and its properties" provides knowledge about the temperature of a liquid, its physical size, unit, their scales, which determine the thermal state of a substance, and what instruments are used to measure temperature. At the end of the topic, the practical task is to provide information about the role and importance of fluids in the operation of excavators and cranes, heating buildings. This competence is formed by knowing the scales of thermometers, barometers, manometers,


**2. Formation of national and cultural competence**





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