****

**BIOLOGY, CHEMISTRY**

**Task1**

* 1. **Tasks for group “Analysts”**

Aim: Investigating the water in the lake, measuring the temperature, density, turbidity, pH, amount of oxygen, hardness of water, electrical conductivity of water.

Integrated subjects: Biology, Chemistry, Physics.

Equipment: thermometer, Phillips beaker, aerometer, measuring glasses, filter, funnel, solution of all-purpose indicator, electronic pH-meter, Vernier, paper towels, camera / smartphone.

1. Measure the temperature of water in lake Käsmu with thermometer. Put thermometer into the glass with the sample of water. Determine the temperature according to the thermometer scale.
2. Measure the **density** of water in lake Käsmu with the help of aerometer / densimeter. Put the aerometer into the glass with the sample of water. Determine the density of water according to the aerometer scale.
3. Determine the **turbidity** of water in lake Käsmu.
4. Determine the **рН of water** in lake Käsmu with the help of all-purpose indicator. Moisten the test paper with the water and compare the colour with pH scale. Determine the exact pH value with the help of electronic pH-meter. Dip the device into the glass with the sample of water. There will be the exact pH value of the water on the electronic display. According to the results of this experiment it can be concluded what the acidity or alkalinity of the water sample is.
5. Determine the amount of **oxygen** in the water with the help of instrument “Vernier”.
6. Determine the **hardness of water** with the help of instrument “Vernier”.
7. Determine the **electrical conductivity of water** with the help of instrument “Vernier”.
8. Fill in the table according to the results of the experiment.

|  |  |
| --- | --- |
| **Factor** | **Value** |
| **Temperature** |  |
| **Density**  |  |
| **Turbidity**  |  |
| **рН of water** |  |
| **Oxygen content** |  |
| **Hardness of water** |  |
| **Electrical conductivity of water** |  |

Good luck in work!