Nobliści

Szkoła Podstawowa im. Polskich Noblistów

RESEARCH QUESTION

Does human activity affect environment pollution?

SUMMARY OF PROJECT

We learned how the carbon cycle works in nature and what is the importance of man in this process.

Each of the project participants counted their carbon footprint and learned, how our existence affects the fate of the planet. The more we supply harmful substances, the more we taint ourselves and the planet.

We also learned, that particulate matters can warm and cool the climate.

It was also important to learnt about the factors affect air pollution such as ozone, methane, nitrous oxide and particulate matter.

The latter factor has become a key factor in our research because it can affect the climate not only globally, but also locally. A component of fine particulate matter (PM) is carbon, which is a product of incomplete burning of fuels. This component may contribute to global warming.Research – collecting data at the place of residence of each participant. Each student was to carry out a reliable observation of the components of the atmosphere at the appointed time, write down their values and elements of sky observation

We collected data from Monday to Friday at 4.30 pm after school, following the instructions.

From the weekly observation, they sent completed issues, questions or doubts, refers to implementation of tasks by the TEAMS platform.

The time of observation of atmospheric components - February 8, 2022 and we conducted research until April 1, 2022.

We conducted all observations at the student's place of residence.

Figure 1: Main results

MAIN RESULTS

We found analyzing the collected data that in Nowe Skalmierzyce air quality was good at the observed time.

There were three incidents, that show high levels of particulate matters and worse air quality. We are surprised by such results because we thought we were breathing polluted air.

We decided to conduct observation in the summer, autumn and winter to compare the collected data and verify it. In reference to the collected information, we want to compare observation data in the cycle in different times of the year.

We also found out from website of the Town and Commune of Nowe Skalmierzyce Office, that the "Clean Air" campaign has been conducted since 2020, refers to the replacement of old furnaces.

We want to check how many households have benefited from such a co-financing of furnace replacement and whether the air quality has changed.
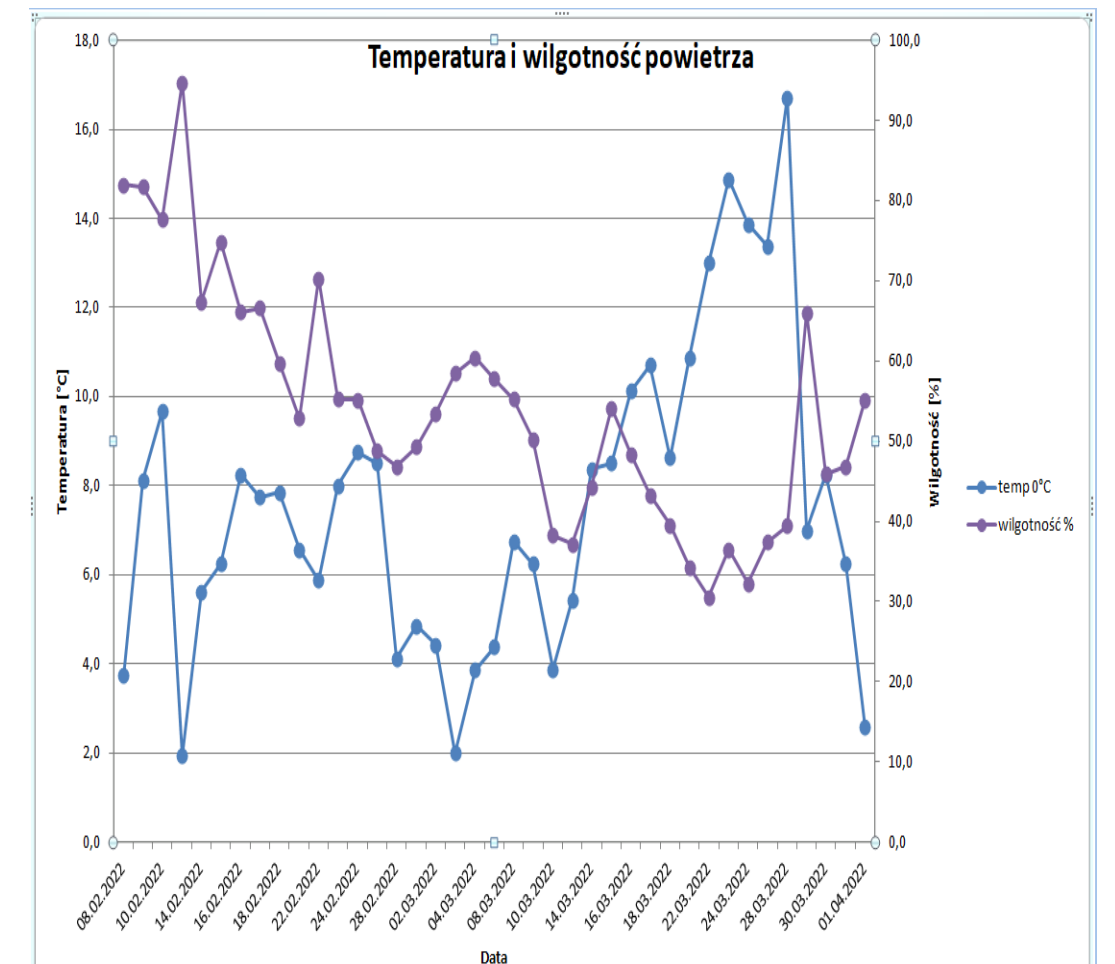

Figure 2: Analyzing the collected data, it was found that these days the air humidity was falling and the air temperature was increasing. A northwest wind was blowing, which meant that air mass would be moving towards our town.

ACTIONS TO HELP LESSEN TO THE PROBLEM

Figure 3: Microscopic observation

During observation and doing of microscopic preparation, many students were surprised, because there was not visible pollution on the vessels. Only when the material was placed on the basic slide under the microscope that was noticed individual clusters of soot.

Small particles of soot were visible in most of the preparations. After rubbing, a black, slightly oily smear remained. We decided to conduct observation in the summer, autumn and winter to compare the collected data and verify it. In reference to the collected information, we want to compare observation data in the cycle in different times of the year.