CLIMATE DETECTIVES 2021 – 2022

Szymborska's team
Private Primary School No. 63

RESEARCH QUESTION

Nuclear energy - what are its pros and cons. Nuclear power plant - myths about it.

SUMMARY OF PROJECT

During the project implementation, we learned about nuclear power, radiation and the construction of a nuclear power plant. We have prepared a survey. Through the survey, we examined the knowledge of the local community about radioactivity and nuclear energy. Parents, teachers and students from our school participated in the survey. The results of our research are presented graphically (link: https://tiny.pl/98vbq). Students prepared an information brochure on nuclear energy and radioactivity (link was posted on school social media). While working on the project, the team learned about the construction of a nuclear power plant. After analyzing the scientific materials, the students developed and created a 3D model of a nuclear power plant in the Tinkercad program, the reactor of which is powered by a track. Why did we choose this element? Because there is six times more of it on Earth than uranium, and therefore it is an economical alternative way to obtain nuclear fuel. Model of a nuclear power plant (link to the model https://tiny.pl/98nqc). The model of the nuclear power plant was printed on a 3D printer. Nuclear energy is not everything! During the project work, students learned about renewable energy sources (solar, wind, biomass, energy i from salt water). A summary of our project is available at the link: https://tiny.pl/98vb1. During our project, we researched - we used the statistical data of the Central Statistical Office, VIEP, Airly, eesa, our own questionnaire, radiation measurements - with a dosimeter (a device for measuring the dose of ionizing radiation).

Figure 1: Information booklet made by the students

MAIN RESULTS

The results of our research work:
1) Presentation of our research results: https://tiny.pl/988xz (Please open the link and see)
2) Information booklet made by the students https://tiny.pl/988mh (Please open the link and see)
3) A video presenting our work on the project: https://tiny.pl/98vb1 (Please open the link and see)

Figure 2: Research questionnaire results

ACTIONS TO HELP LESSEN TO THE PROBLEM

Based on the questionnaire, students created an information brochure on nuclear energy and radioactivity in Polish and English. Students created a 3D thorium nuclear power plant project and a video of working on the project. The students also built prototypes: a windmill (wind energy), a robot (social energy) and a car (solar energy). The effects of our work have been published in school social media.
- Information booklet made by the students https://tiny.pl/988mh (Please open the link and see)
- A video presenting our work on the project: https://tiny.pl/98vb1 (Please open the link and see)

Figure 3: A film presenting the work in the project