



ERASMUS+ KA2 PROJECT
SCHOOL EDUCATION No. 2018-1-PT01-KA229-047365
Sustainability for Democracy, Democracy for Sustainability

Fourth Virtual Transnational Learning Activity in Kuusalu – Estonia
27th of October until the 27th of November 2020
Kuusalu Secondary School
“Democracy, Environment, Science and Technology”

The notion of Sustainability in the present pandemic situation is more relevant than ever. The need to preserve the life and security both of people and the environment, but also to ensure the values of democracy and cooperation in conditions of anxiety for the future initially, and then in conditions of lockdown, sensitized the Erasmus team. For this reason, in the context of the 4th Virtual Transnational Learning Activity, they decided to deal both with Construction and Alternative Sources of Energy, as well as with the possibilities of cooperation provided by New Technologies.

Construction and Environment

The students met the architect and Head of School Activities of the Directorate of Secondary Education of Imathia, Lena Demitriadou and discussed the impact of construction on the climate crisis and the possibilities to avoid further climate change, as buildings consume 40% of energy in Greece.

The proposals of the scientists move in two directions:

- a) traditional architecture (local materials, depending on the climate of the area)
- b) bioclimatic design (heat insulation, planting, renewable energy sources)

In this way we can make good use of the sun, the heat of the land and the air and the shade of the plants to ensure ideal living conditions, which serves the goal of sustainability.



21/2/2020

Technology and Collaboration by means of Using Google Drive

In the context of the preparation for the 4th Mobility on the topic "Democracy, Environment, Science and Technology", an experiential workshop was held with the professor of Computer Technology of our school, Thomas Margaritopoulos, on the use of Google applications, such as the Google drive, while there was also practice on groupwork technological tools, which promote democratic education and work, both at school and in the future academic studies of the students.



10/3/2020

1. Upload content to get started

Any updates you make are automatically synced in the cloud and across all of your devices.

2. Create a shared drive for your team

Drive has two different spaces for files: My Drive, for personal files owned by you, and shared drives, for files and folders that your team is collaborating on and accessing frequently. Shared drives are owned at the team level and every member of the team automatically has access to any files in the shared drive.

3. Collaborate in real time with your team

Drive enables you to easily collaborate with team members in real time. Add a comment to any file type, including PDFs and image files, and tag team members into your comment to assign a task or action item. Drive sends email notifications that summarize activity and comments on your files, and you can respond to these items directly in the email, without the need to switch between apps. With tagging, commenting, and action items, Drive takes your collaboration to the next level.

4. Work more effectively with existing Microsoft Office files

Drive supports 100+ different file types, including Microsoft Office files. For example, you can store and comment on Microsoft Word files directly in Drive, and you can edit and collaborate in Office files without converting formats. Drive also features real-time presence for Office files,

enabling multiple users to work on the same file without worrying about version control issues. With support for over 100 different file types, Drive empowers you to collaborate effectively with others, no matter the file format.

5. Keep your team on the same page and avoid version conflicts

With Drive, version control isn't a problem. Each file has a rich version history, and granular changes are recorded and color-coded by person, so it's easy to see who made what changes and when. You can see minute-by-minute versions of each file, and you can always copy content from older versions over to the current file, or even restore an older file completely if needed, exactly as it was. All of your collaborators can work in the same document, at the same time, and create a single source of truth for your team.

Photovoltaics

The students of the 5th General Lyceum of Veria, in the context of their research on the relationship between Technology and the Environment, had an online discussion and interviewed Mr. George Chrysis, who is active in the field of energy as an electrical engineer and computer engineer. Through this interview they draw information about the operation of Photovoltaics and specifically about the way they convert solar energy into electricity through panels, absorbing 20% of it.

Mr. Chrysis told them that anyone can install photovoltaics in their home, after being granted permission and if they can afford it. For home use, we can choose panels up to 10 kW. In addition to houses, photovoltaics can be installed on farms or even on seas or lakes. As for the environment, Mr. Chrysis stressed: *"Every kilowatt hour produced by photovoltaics, and therefore not by fossil fuels, means avoiding the release of about one kilogram of carbon dioxide (CO₂) into the atmosphere. One kilowatt of photovoltaics prevents the release of 1.3 tons of carbon dioxide each year. It takes 2 acres of forest or about 100 trees to absorb this amount of CO₂."*

In conclusion, he expressed the hope that the complete replacement of non-renewable energy sources with renewable ones will be possible with the development of science and technology.



14/10/2020

Wind generators

The students who participate in the program during their preparation for the 4th Mobility topic "Technology, Science and Environment", communicated online with the Citizens' Assembly "Elefthero Vermio" investigated the positive and negative effects of the Wind Farm on Vermio (a mountain above the city of Veria) in the economy and the environment of the area.

The Citizens' Assembly "Elefthero Vermio", which is an autonomous collective of local people and other residents of the area with particular sensitivities and concerns about the issue of the wind farm, has been in favor of wind energy from the beginning. At the same time, however, they are against its industrial exploitation and specifically against the huge wind farm for the production of electricity on the mountain of Vermio. And, although they said "no" to the creation of this giant wind farm, they are positive about renewable energy sources in general - such as the wind - for their beneficial contribution to minimising the damage caused to the environment by the use of fossil fuels.

The collective "Elefthero Vermio" believes that Renewable Sources of Energy and specifically wind energy production clearly helps to reduce greenhouse gas emissions. And this view emerges from studies by environmental- ecological organizations and scientific research worldwide. The use of Renewable Sources of Energy is one way, to stop the destruction of nature. But this must be done with proper planning and should aim at the balanced coexistence of people and nature. Renewable Sources of Energy alone are obviously not going to provide the final solution. We need a more comprehensive change in the way we produce and consume, in the way we house our lives and our dreams, in the way we plan the future of the planet. And this change is a matter of the common steps that all democratic citizens must take on a local, transnational, and global level.



21/10/2020

It should be noted that a visit both to Vermio Wind Farm and the photovoltaic park had been planned, but the special conditions of the coronavirus pandemic did not allow the implementation of these visits.

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