

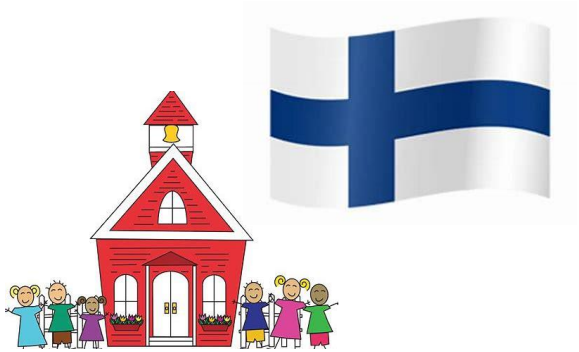
Our GEAR Project



Joanne Jalkanen, PhD
Rajala School

OPH Webinar

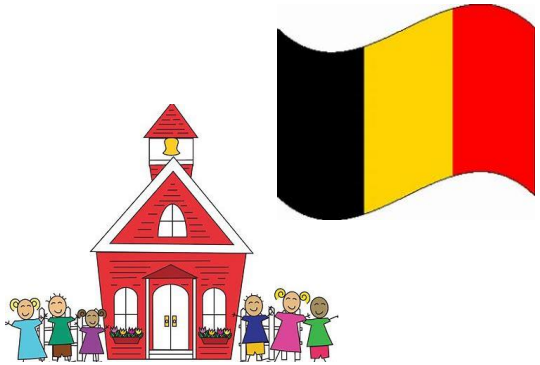
9.10.2024



a school in Finland

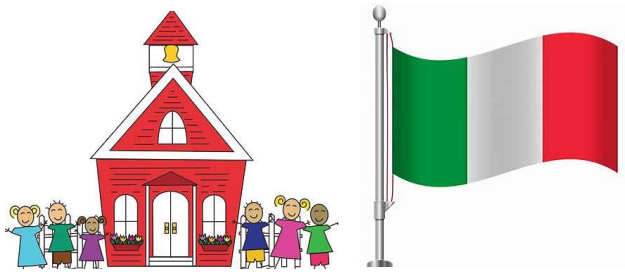


a school in Greece

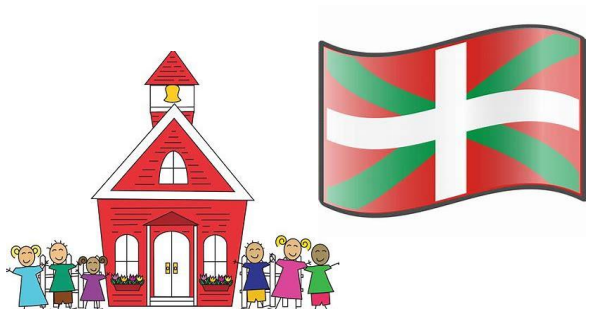


a school in Belgium

Once upon a time, there was ...



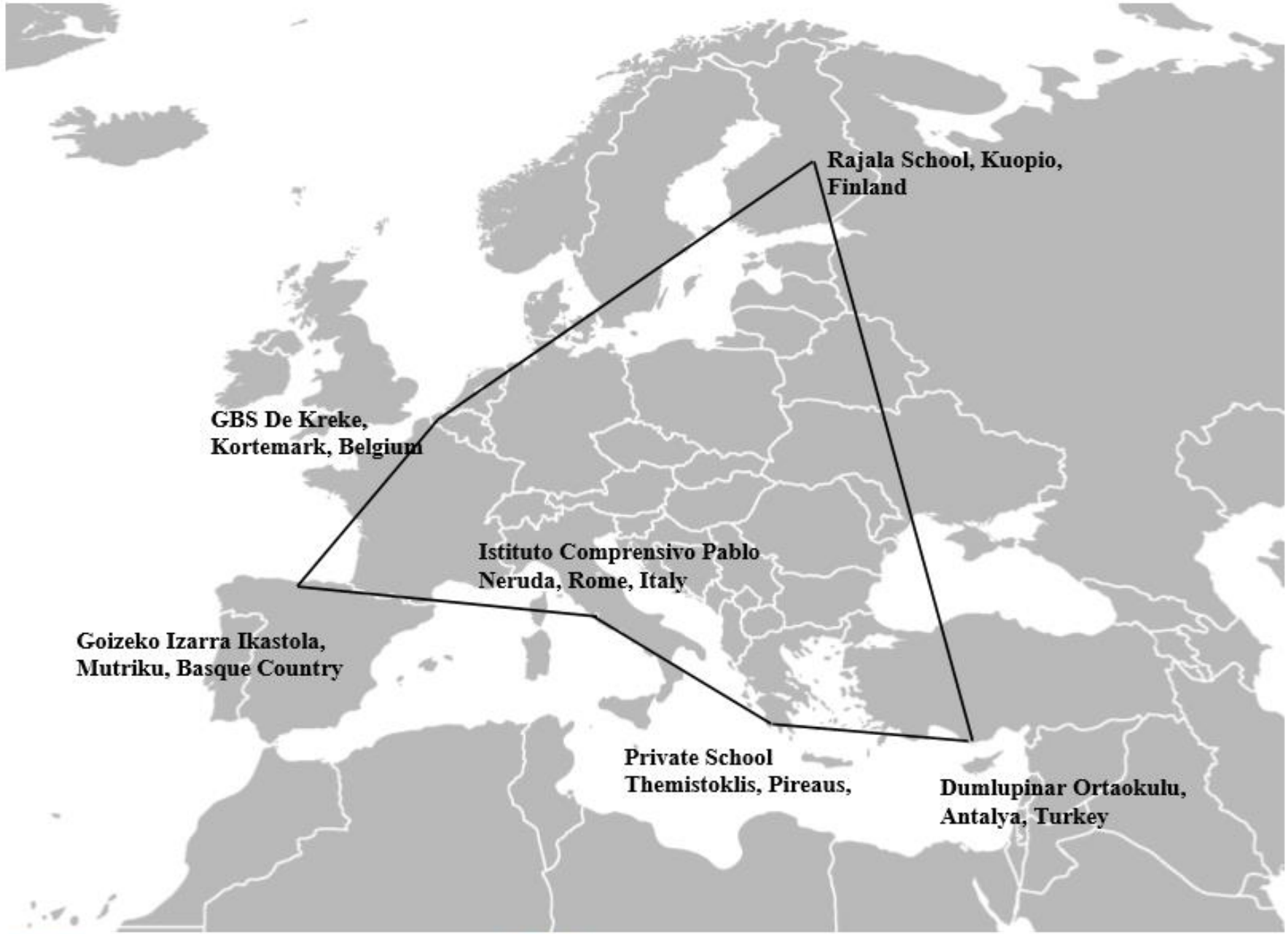
a school in Italy



a school in the Basque Country



a school in Turkey



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The Individual Level

- Making abstract concepts concrete
- Giving children voice / hearing their ideas about their world
- Involving young minds in science









Greenhouse Gas

Have you ever been in a greenhouse?

We call the gases around the Earth **greenhouse gases** because they behave like the glass in a greenhouse. They let the sunlight in but stop the heat from escaping, trapping it inside.

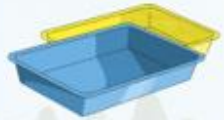
Because of this, Planet Earth is warming up.



Comparative Test

We are going to do a test that shows the effects of greenhouse gases.

What you need:



2 trays



Plastic wrap



A stopwatch



2 blocks of ice



2 building-brick houses



A sunny day

Comparative Test

Prediction:

What do you think will happen?

- The ice in the covered environment will melt faster.
- The ice in the uncovered environment will melt faster.
- The ice in both of the environments will melt at the same rate.



Climate Change Comparative Test

I can measure the melting of ice in a comparative test.

Method

Prediction

Results	Environment 1	Environment 2
Time for ice to melt		

Conclusion









The Local Level

- Connections with Nature and own environment through activities and field trips
- A connection with Nature = a greater feeling of belonging
- Nature Discourses – having the language to describe, discuss, and understand the environment and environmental concepts (also in urban contexts)
- Developing shared values and ideologies to form a community of practice
- Involvement fosters awareness and develops responsibility






WE
LOVE
ERASMUS


ATXUKALE
Xiri Andonegi artistaren gunea da.
Ebaristo Txurrukaren bustoa dago.
Bertatik portua ikusten da.
Iturri berezi bat dago.



The National Level

- Adding an often-missing, hands-on element to the national curriculum
- Raising awareness and responsibility



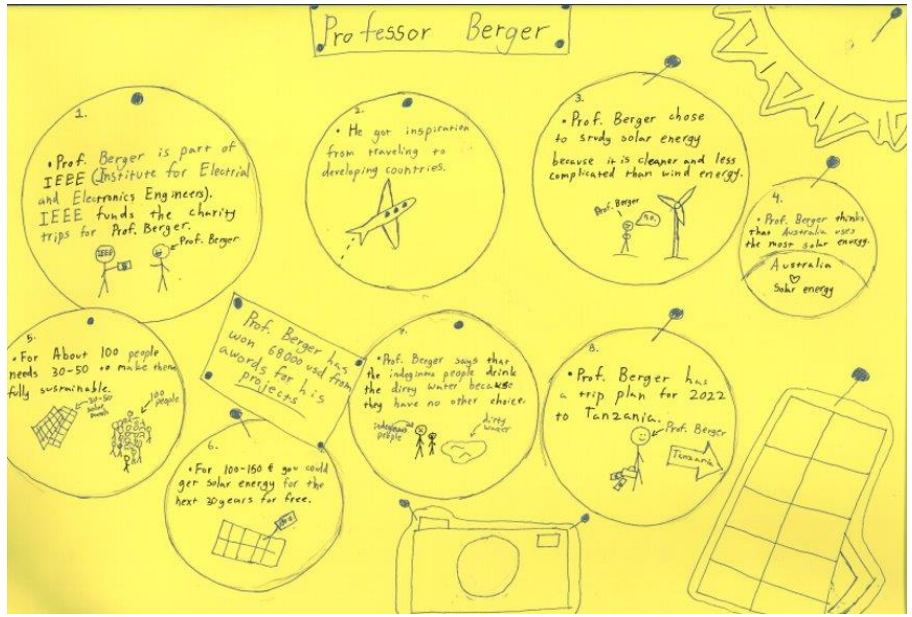


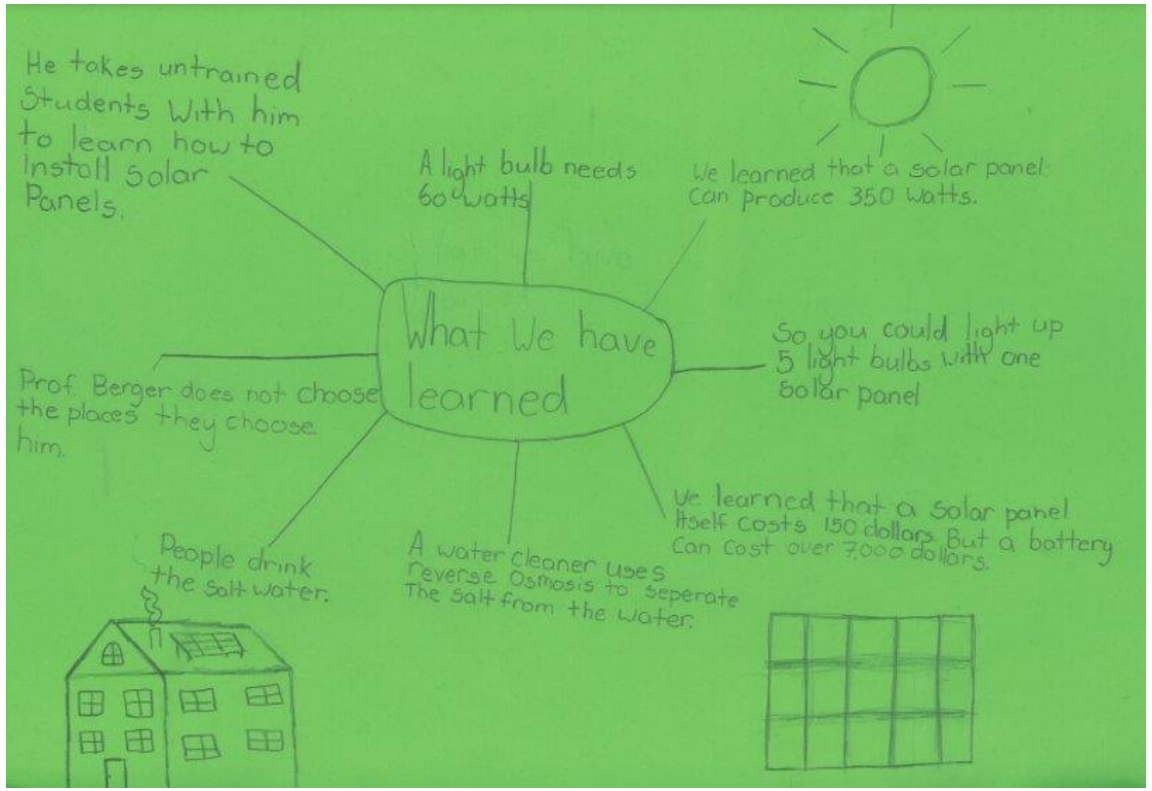


The Transnational Level

- The shared responsibility for our Earth unites us
- Crossing borders makes this concrete and offers a broader worldview
- Global communities of practice







Dear Professor Berger,

We saw your slides and we thought that they were interesting and nice.

Our group came up with some questions that we would like to ask you.

1. How much energy does one solar panel produce?
   a. It varies, but generally between 280 Watts to 350 Watts. However, in North America, the sun is only highest in the sky to produce solar energy for about 6 hours.
2. How much does one solar panel cost?
   a. Just the panel is about 100 to 150 euros. But there are many other things need, like batteries.
3. How long does it take to install a solar panel?
   a. If one had good practice, I think in 1-2 days, maybe 3 days. However, I took untrained college students, and they needed 10 working days to learn, design, build and install everything.
4. How do you choose places to go and visit?
   a. It chose me. In discussions with a local university there, it became clear that this area needed more help than other places I learned about, so I decided to build a project where there was the most need.
5. What is the average amount of money you need for a project?
   a. Probably around $15,000 USD to $80,000 USD, not including travel, lodging and meals.
6. How does the water cleaner work?
   a. Reverse osmosis, by using solar-powered pumps and pushing the water through special membranes that filter even very small things, like metal ions.
7. Do people actually drink the salt water?
   a. Yes, they do, because they have no other options. There is a scarcity of water and what they can find is contaminated. But it is not salt water, like the ocean. It is brackish, somewhere in between fresh and salt.
8. What inspired you to help others around the world?
   a. I built my life on science trying to invent new things, but now a part of me wants to spend time to also help others, now that my position in the community gives me a loud voice.
9. What was the biggest solar panel you installed?
   a. The standard 330 Watt size, 1 meter by 2 meters.
10. How much energy does a school need?
    a. Usually several kilowatts

We hope that you will be able to answer our questions and we hope that we can have a virtual meeting altogether.

Yours sincerely

Erasmus+ THE OHIO STATE UNIVERSITY IEEE Advancing Technology for Humanity The world's largest technical professional organization for the advancement of technology



GEAR: Global and Environmental Awareness and **RESPONSIBILITY**





6th grader's world summit





Wednesday 14th April 10.00 to 15.00

Preparation for the Summit Talk "The Future of our Planet"

Session 1: Roles, rules and instructions





WORLD LEADER BRIEFING

As leaders of countries across the planet, you are responsible for the big decisions that will shape the way we live in the future. These decisions will have short term impacts on the lives of the people living today, but will also have longer term impacts on our planet and everything that lives on it.






Prof. NISSINEN
grassland
Prof Yeager


DR.Pekka Pouta
FROZEN WORLD
Prof. Tiranen




Prof Stigll
Prof Cowan


Prof Tamoka

“Let’s make some kites and fly them,” said Italy.





So they did.






















SPOOKY!









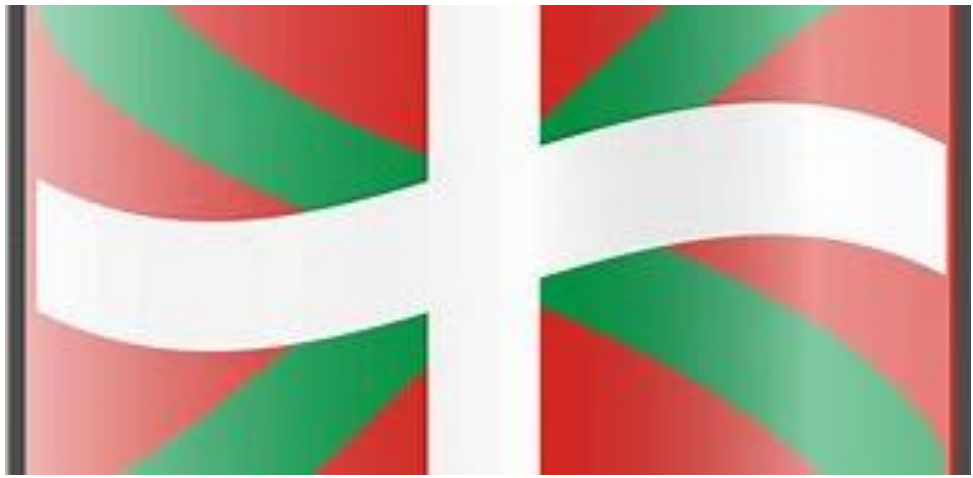





PYREX



















“We have friends in the Maldives,” said Finland. “Let’s invite them too!”





So they did.







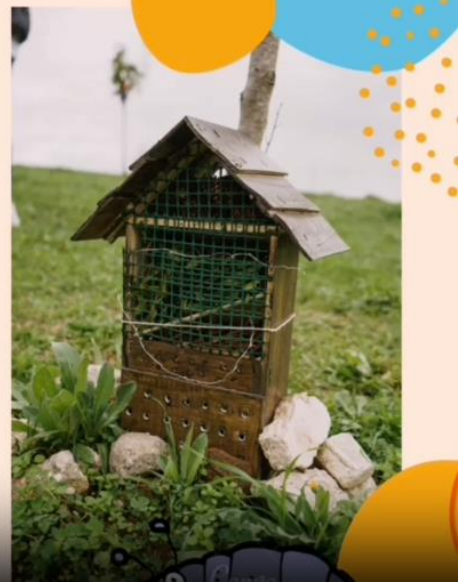
Outdoor Pedagogy

- A school eco-garden
- Insect hotels
- An outdoor classroom
- Making green spaces in urban schools



Insects who need a safe place







HARVESTING!

LAST THURSDAY WE HARVESTED BROAD BEANS. NOW WE ARE WAITING TO SEE WHAT DELICIOUS DISHES OUR STUDENTS COOKED AT HOME.







We look forward to developing our Outdoor Classroom activities.







