



Creating Tomorrow's Explorers

Space & Education: A teacher's perspective

Hello !

My name is Panagiota Alexandra Fratti.

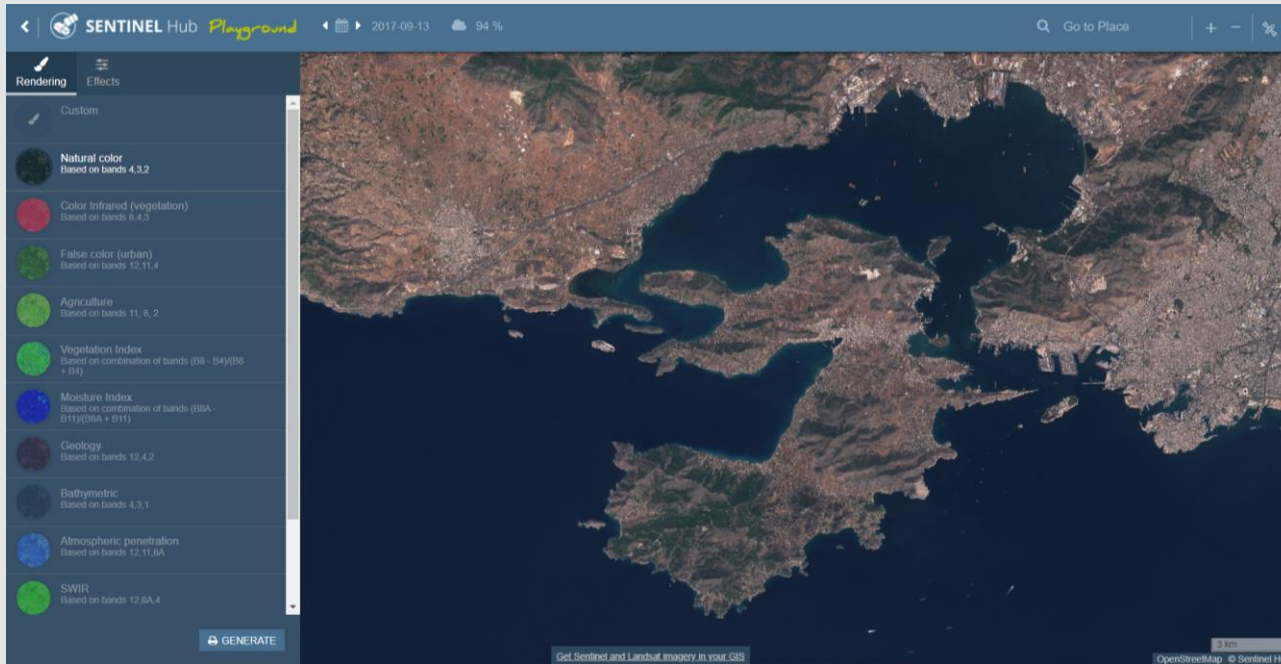
I am an educator at the Primary School of Salamina.

And I have participated in ESA's Robotics and Automation teacher Workshop

the ideal place to understand how space and education are combined !



Introduction



This is Salamina, a place of great historical importance.

Unfortunately, it is an island with many environmental problems.

On top of them, in 2017 an oil spill, caused by a sunken tanker, was formed along the Saronic Gulf.

With my students, we tried to understand how disasters like this one affect our planet and our lives.

Introduction

We participated in the environmental project “Climate Detectives”, an ESA school project for students (8 - 15 years old).

This initiative engages students with space science and space engineering themes, including curricular and extra-curricular activities.

Students are challenged to make a difference in understanding and protecting Earth’s climate.

They are identifying a climate problem by observing their local environment and then, they investigate it.



→ CLIMATE DETECTIVES

Activity Description

During the first phase of our project, we learnt what satellites are and why they are the necessary for Earth sciences.

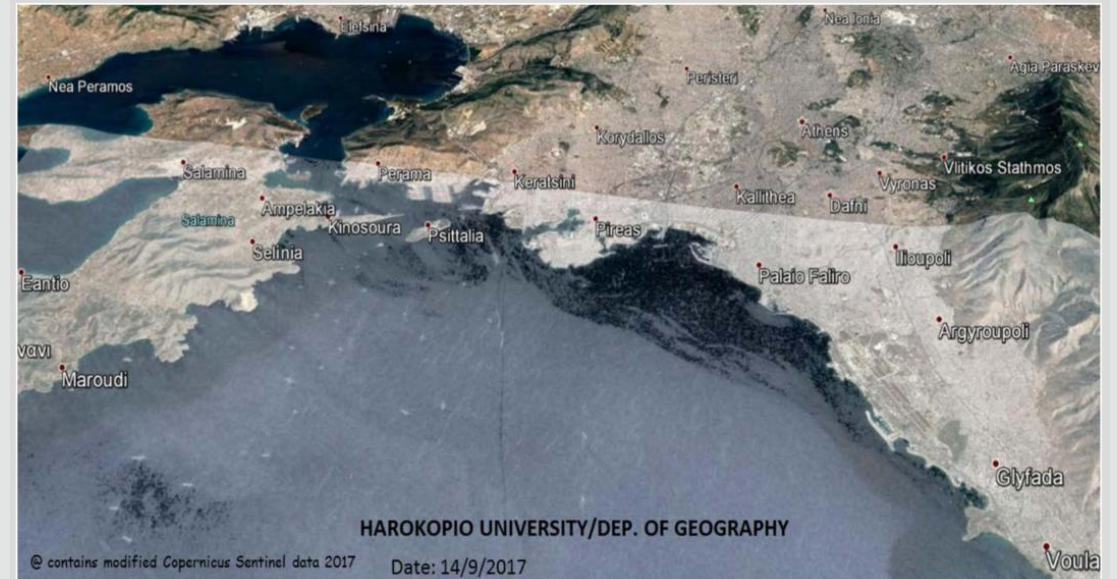


Building and programming satellites using LEGO bricks

Activity Description

We also found data (pictures from the Copernicus / Sentinel satellites) in order to understand how large the oil spill was and which parts of our island and other areas of Attica were affected.

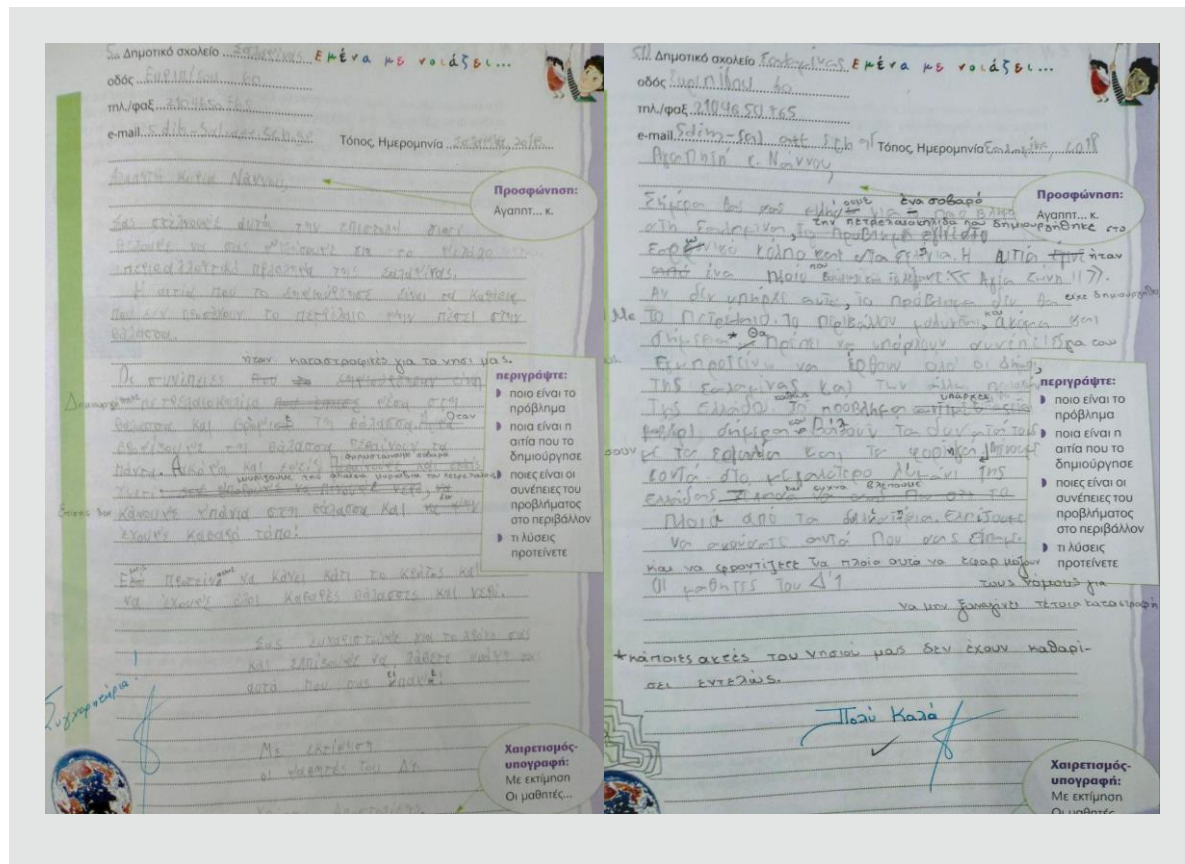
Satellite image of the oil spill spread on the 4th day after the leak accident (morning acquisition 04:31 UTC)



Activity Description

During the second phase of our project, we collected pictures and read interviews, acknowledging how the oil spill affected peoples' lives.

We also wrote letters to our island's mayor in order to express our thoughts.



Activity Description



Eleni Svoronou , writer / WWF Greece

Furthermore, we organized two kids workshops.

The first in cooperation with a children's books writer, member of a major environmental organization.

In order to learn how our planet's climate affects life on it.

Activity Description



Evanthie Michalena, energy policy expert

The second in cooperation with a representative of the European Commission "Energy Savings Team".

In order to discover ways to limit our dependence on fossil fuel and discuss our energy options.

Activity Description

Our project participated in a science communication contest.

And received the “ΕΠΙ²” prize in the category “School Projects”.

We were all very happy and proud !



Students' accomplishments

As “Climate Detectives” our students managed to :

- ✓ Develop their STEM (Science, Technology, Engineering, Mathematics) and linguistic skills.
- ✓ Reinforce their creativity and critical thinking.
- ✓ Improve their understanding of environmental issues.
- ✓ Realize that their behaviors can have an influence on our planet's climate.



Space for humanity

Our students now have a better understanding of :



SPACE4SDGS

- ✓ The exploration and use of space for the benefit of all humanity: for peace, security and development.
- ✓ Space-based services and technologies which are key in understanding climate change.
- ✓ The need to achieve international cooperation in a world which is constantly evolving.

A digital visualization of Earth's magnetic field. The Earth is shown in the center, with its continents and oceans visible. Surrounding the Earth is a complex, multi-layered structure representing the magnetic field, composed of numerous small, colorful dots (blue, green, yellow, orange, red, purple) and lines. The background is a dark blue grid of small squares, with a prominent vertical blue line passing through the center of the Earth. The overall aesthetic is futuristic and data-driven.

Thank you !