



ERASMUS+ PROJECT

RANGERS OF CHANGE

ERASMUS+ PROJECT
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Co-funded by the
Erasmus+ Programme
of the European Union





5 EUROPEAN COUNTRIES
5 EDUCATIONAL INSTITUTIONS
24 MONTHS TIME OF EVENTS
3000 STUDENTS



Rangers Of Change

edited by Mirela Vilcu

2024



Co-funded by the
Erasmus+ Programme
of the European Union

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The "Rangers of Change" project aims to create a positive societal impact by empowering individuals to act as agents of change in their communities. The dissemination plan focuses on spreading awareness of the project's objectives, activities, and outcomes to a broad audience. This will be achieved through targeted communication strategies, including digital media campaigns, community events, and partnerships with relevant organizations.

PRESENTATION



RANGERS OF CHANGE

This project aims to inform teenagers, communities; change attitudes, practices for environmental protection; to acquire skills, attitudes through practical, interactive activities, using experiential learning; to achieve collective projects that generate change, through results of proposed learning(individual, school, community level)

Teachers and students from partner schools got complex learning experiences, combining non-formal, informal education, respecting education principles for sustainable development (Student-centered, Critical Thinking, Systemic Thinking, Partnership , Participation, Connected to real lives of children and communities, Solution and Action-oriented).

ROC integrated education for sustainable development in school curriculum, through a curriculum offer at school's decision, adaptable to local context, linking themes of environmental protection of economy, society, culture, education, heritage, health, social inclusion, according to principles expressed in European Union Strategy 2020- transition to society, economy without greenhouse gas emissions and efficient use of natural resources.

"Rangers Of Change". During the project, participants from the partner schools explored innovative ways of fighting against climate change. Our activities increased students' capacity in helping slow climate change by conserving energy, minimizing vehicle use, eating locally grown foods, recycling. We reduced greenhouse gas pollution at home, at school; saved energy, reduce pollution, remove carbon dioxide. We discussed barriers and found ways to overcome them. ROC activities taught our students and community to remove carbon dioxide from atmosphere by planting trees, gardens, helping to protect forests, undeveloped land, open space. Our project aim is to build a future in which people live in harmony with nature. We needed new ideas, inventions that can reduce greenhouse gas pollution, remove carbon dioxide.

Our students discovered new solutions and our schools and communities became "greener". ROC had Recycling and Waste Reduction as common values. Activities of recycling, composting taught students, local community to save energy by reusing items, reducing waste. ROC created a strong knowledge base around the causes of climate change and global warming; ROC also developed strong skills that allowed participants to apply their knowledge in real world, including problem-solving, critical thinking, teamwork, coping with uncertainty, empathy and negotiation. ROC taught our students to use these transferable skills in their future jobs and to become involved citizens. Teachers noticed, from previous activities, that students enjoy working on climate action projects, they like searching and finding new solutions on climate action and recycling.

CHAPTER 1



RANGERS OF CHANGE PARTICIPANT SCHOOLS



IES ELADIO CABAÑERO

IES Eladio Cabañero is a state secondary school for students aged 12-18 (Compulsory Secondary Education 12-16/ Upper Secondary Education 16-18). The school has a current enrolment of 520 students with a team of 50 teachers. It operates on a 6 period 55-minute schedule from 8.30 am to 2.30 pm with a 30-minute break.

The school is located in Tomelloso, a mid-sized town with a population of about 37,000. Tomelloso is 180km south of Madrid, in the Autonomous Community of Castilla La Mancha, the land of Cervantes and Don Quixote.



TOMELLOSO, SPAIN

Our aims are:

To provide an enjoyable, challenging, and purposeful learning environment for every student so that they can achieve their full potential

To help all pupils acquire the values, skills, knowledge, and attitudes to prepare them for life after school.

To celebrate diversity.

To nurture self-esteem, confidence, and pride in one's achievements.

To build a positive partnership between students, staff, parents, and the local community.

To encourage responsible environmental behaviour.

To promote language learning.

To raise awareness of Europe's language and cultural diversity and European democratic values.

To integrate ICT into teaching and learning.

Over the years our school has been involved in different national and international projects.

Thus, it is worth mentioning:

- The Watchtower of Languages, whose aim was to “coordinate activities of various kinds related to language learning”.
- KODAK Project, aimed to “establish shared strategies to incorporate language competence in all subjects of the curriculum”.
- ICT Seminar: a seminar was held for 4 years with the aim of “exchanging experiences in the use of ICT: educational use of ICT, School 2.0, etc., and sharing news, doubts, strategies, problems, etc., on the use of ICT in schools”.
- The New Literacy, an innovation project aimed to “promote the development of oral and written expression”.
- KODAK2 Collaborative Group (2014-2015), whose main objective was “the need to improve comprehension and linguistic expression in both oral and written form in our pupils, being aware of the importance of this in the teaching and learning process, as well as becoming familiar with new techniques and working methods”.



- Seminar Evalua: new forms of evaluation, academic year 2016-2017.
- Erasmus+ Project KA1 “Ludus”, with mobilities to the United Kingdom, Finland, Greece, Italy and Malta; aimed to incorporate oral skills in all subjects so that students improve this competence.
- Seminar Improving teaching digital competence at IES Eladio Cabañero, academic year 2017-2018.
- Teacher study groups: Myths in Nutrition and Democratic participation through the institutions of the European Union I, academic year 2018-2019.

– Teacher study group: Democratic participation through the institutions of the European Union II and the seminar Improving teaching competence in ICT tools, academic years 2019-2020 and 2020-2021.

– European Parliament Ambassador School Programme since 2017, which aims to promote democratic values and European citizenship among young people.

-Euroscola 2020 in Strasbourg and Euroscola online 2021.

2ND GENIKO LYKEIO ELEFThERIOU – KORDELIOU

2nd Geniko Lykeio Eleftheriou – Kordeliou is a public high school located in West Thessaloniki, Greece. It consists of 300 students and 28 teachers working in it. The building is also used by another public school, 2nd Gymnasio Eleftheriou – Kordeliou and two nursery schools, so there's quite serious lack of classrooms, laboratories and space in general.

As 2nd Geniko Lykeio Eleftheriou – Kordeliou is located in an urban area that is polluted and environmentally degraded, we are interested in participating in programs that aim to environmental awareness and interventions.

In the past years eTwinning programs were completed, gaining for one of them the European Quality Label.



Although we don't have much experience in European programs, every year we complement quite a few "environmental", "cultural" and "health protection" programs with the participation of students and the collaboration of teachers. The activities carried out before, in the previous workshops and partnerships, helped us achieve skills and expertise, our results from the previous achievements became known in our local communities, as we presented, at the end of each activity, articles and presentations in the local media; summaries in the teacher-parents meetings; summaries in the local and regional meetings with other teaching staff.

Our previous experience in the areas of communication and dissemination will be relevant for this new climate action education project. In the wider lifelong learning community, we have always presented cultural activities conveying the message of our previous activities and projects to the local community; we urged our students to write articles in the local and regional media, at the end of each activity that had been achieved before.



SCHOOL NO 195 BUCHAREST

School No. 195 is a primary and secondary school, situated near a large park in our capital city and it operates in three buildings. Having 2485 students, 137 paid staff and 16 unpaid staff, the school has gained recognition and prestige, mainly due to teachers' efficiency and their abilities in working with children but also to the outstanding results that have been achieved by students at school competitions. School No. 195 has been affiliated to UNESCO since 1999 and in 2012 it received the title of "European School". Our school projects and programmes involve both students and parents, along with teams of teachers working together.



Our school adapts its educational policies and standards to the European level by encouraging training and improvement through scholarships and international grants, experience exchanges and involvement in national and international projects and partnerships. Our school has a direct contact with all social categories in our district and this feature allows a fast and clear communication and the perfect opportunity of finding different social groups interested in the same domains and directions as our institution, in order to run an European project.

Our school is operating a few cases of pupils at risk of social exclusion, and there is a small percentage of pupils with cultural differences, educational difficulties and special needs who have been integrated in the common activities in which our school was involved. We share the outcome of our students social and psychological needs (through demonstrative activities, methodological meetings, exhibitions, projects, portfolios, magazine articles, detailed descriptions, reports).



Their interest for the European programmes is increased, therefore the usefulness and their efficiency are sustained through concrete arguments.



School No 195 became a Green School, starting 2018. The key people involved in this project, which is based on their own experience and on our institution character, will develop climate and recycling education activities for students and propose workshops. All the key people will organize extra-curricular activities and exchange their experience. Our institution will establish and keep relationship with the other partners about the relevant areas of the project. School No 195 developed, over the years, a partnership cooperation with WWF, Greeninitiative and British Council. It has been involved in "Climate Action in Education" programme, coordinated by WWF and has taken part, since 2018, to the international project "4/4 Project For Friends", project initiated by The Embassy of the USA in Romania and the American Councils for International Education." Inspired by the thoughts expressed by Martin Luther King Jr. : "The most urgent and insistent question of life is: what do you do for others?", our students and teachers keep celebrating the values of volunteerism and friendship.

VILKAVISKIO R. GRAZISKIU GIMNAZIJA, LITHUANIA

Our school is located in one of the most sparsely populated rural Lithuanian territories. There is a lack of social services, an extremely high level of unemployment, risk of social exclusion and quite little spaces for children's self-realization. Also, there is a problem of the decreasing number of students in our school due to declining birthrate and emigration. The nearest city is 50 kilometres away from the area where the school is located. The biggest part of students, 76 per cent, are taken to school from other areas and only the rest live nearby school. Feed-in (because of the disadvantaged position of the family) is provided to 45 percent of pupils. There are 17 percent of families at risk children and 41 percent of the children from multichild families. Children from incomplete families make 30 per cent. Part of students lack learning motivation and have problems with behaviour. Moreover, the possibilities of our pupils are restricted by negative social phenomenon in families.



GRAZISKIAI, LITHUANIA



It is crucial for us to participate in the project, as it is high time something has to be done more thinking locally and acting globally. Changes due to climate change and threats to environment are inevitable, and it is school students that have to be the starting point to make changes, this way they will share their knowledge/new understanding in their families and will further spread the message. By establishing international partnership we will ensure reaching wider target audience, exchanging good practices and making participants aware that the Earth is a home to every living being.

We are experienced in international projects, such as Comenius, Erasmus+ projects (KA1 and KA2): in 2012-2014 – Comenius multilateral project for schools “The United Colours of the European Nature”, which was related with the protection of environment. Also, we have had several eTwinning projects connected with environment, such as “Let’s Save the Earth, our Paradise. We also attended KA1 youth exchange project called “Stop Wasting”; our school also has a “Green Flag” for the commitment to nature protection and constantly participates in national contests/projects that are directed towards environmental consciousness. Our students are conscious about environmental issues, so we can share our expertise with partner countries.



AGRUPAMENTO DE ESCOLAS MARTINHO ÁRIAS, PORTUGAL

The School Cluster Martinho Árias, Soure (AES) is a public school in the municipality of Soure, NUT III in the Coimbra Region. The AES is made up of 171 educational staff (educators and teachers), 66 non-teaching staff and 1445 students, distributed across an educational offer that includes pre-school education; 1st, 2nd and 3rd cycles; secondary education with scientific-humanistic courses and vocational education and training; adult education with courses that promote professional certification. Since 2009, AES has been developing eTwinning projects. It currently has 6 projects underway.

Since 2013 that we have been awarded the National and European Quality Labels and for two years in a row, one of our ERASMUS+ projects was awarded the European Language Label. Since 2018, AES has belonged to the Eurodesk multipliers network with the aim of promoting the Erasmus+ program among young people and relevant stakeholders. Since 2014 it has been a partner of a local NGO that develops youth projects funded by the Erasmus+ programme, namely international youth exchanges and training courses for youth workers, and developed activities within the scope of the European Youth Week 2017.



AES has a very solid experience in local and national projects, developing activities within the scope of the Youth Parliament, promoted by the Assembly of the Republic; EcoEscolas developed by the Foundation for Environmental Education/Association Blue Flag of Europe; Entrepreneurship in Schools, developed by CIM of Coimbra Region; it has been financed by the Ilídio Pinho Foundation in addition to having a European club and several language clubs that promote European citizenship and multilingualism through activities with children and young people.



Activities and experience: our school has long been involved in Etwinning projects tackling environmental problems and for the last 12 years we have been awarded the Eco-Schools flag. Sciences clubs and their activities have been common and this very month our school is involved in a national forum called "Planet Mission 2030". We are also finishing an ERASMUS+ project called ECO-LOGIC. There is also an aquaponics greenhouse sponsored by a national environmental project. Some lesson plans and good practices have also been shared online, namely by Europeana and Scientix. The team involved in the project has extensive experience. Luisa Pereirinha is the school principal and the contact person is an awarded EFL teacher, with experience in eTwinning and Erasmus+ projects.



CHAPTER 2



ERASMUS RANGERS OF CHANGE IN ROMANIA



27th -31st March 2023

Climate change & extreme weather
Mobility in Bucharest, Romania



Our Erasmus+ Project "Rangers Of Change" has started its 1st mobility of Work Package No 2-"Climate change and extreme weather". Our students welcomed their colleagues from partner schools in Greece, Lithuania, Portugal and Spain with traditional dances from each participant country, including Romania. We were honoured to be visited by His Excellency, Mr Donatas Augulis, from the Embassy of Lithuania and Her Excellency Mrs Katerina Makrogiannaki, representing the Embassy of Greece. Special thanks for a marvellous ceremony to our students, teachers and parents! Students, guided by their teachers and supported by parents made this day unforgettable! Congrats, children, you proved YOU are the Change we all wish to see in the world!

RANGERS OF CHANGE IN ROMANIA

DAY 1 - 27th March 2023

On Monday, 27th March 2023 teachers & students from Greece, Lithuania, Portugal and Spain were welcome at School No 195, in Bucharest, Romania. School presentation, greetings were followed by working activities on project issues; workshops dealt with waste management, material recovery, promoting & facilitating longer lifespan of material re-use, recycling, litter reduction campaigns to prevent leakage into the environment. Good, relevant arguments and solutions were found by the participants.

Our common activities increased students' capacity in helping slow climate change at The Museum of the National Bank of Romania- we talked about valuable numismatic collections, interesting stories about the national heritage; the golden vault; students connected past history and testimonials to present and future; identifying and tracking actions, participants learnt how to slow climate change.

DAY 2 - 28th March 2023

Day 2 Erasmus+project 'Rangers Of Change'-Cleaner beaches on the Black Sea coast-WE are the change!

On Tuesday, 28th March, teachers & students departed to Constanta & The Black Sea where they organised the Project workshop-there participants achieved direct observations & collecting data; developing specific outcomes, elements, results of our project campaign "I have got green fingers".

Participants worked on project goals face to face; discussed all the project issues, sharing, defining responsibilities, preparing a plan about impact measurement.

DAY 3 - 29th March 2023

Day 3 Erasmus+project 'Rangers Of Change' -dissemination of project at a TV station and during our meeting with a senator at the Romanian Parliament:

<https://www.facebook.com/1143743259/videos/643735540905955/>

On Wednesday, 29th March school teams had workshops on ROC activities to implement ROC project; techniques of dissemination materials involving students, local community-they organised a meeting at Digi24 TV channel

Teachers & students took part to activities at The Parliament House.

They met a Romanian senator and debated on causes of climate change; raising awareness about climate change; developments which made our lives easier, pleasant, but affected our planet in a negative way; disseminating "ROC" project results.

DAY 4 - 30th March 2023

Day 4 Erasmus+project'Rangers Of Change'-participants mitigated for cleaner forests, as WE are the GREEN change!

Students from all partner schools and their teachers cleaned the forest from Bran Castle and shared environmental education strategies with the mayor of Bran.

Teachers & students departed to The Carpathian forests & Dracula's Castle -Project workshop focussed on direct observations & collecting data; identifying relevant needs for green education; "Cleaner forests on our outskirts" campaign.

They discussed impact of weather changes globally and on all participant countries; identifying fuel-efficient transportation methods.

DAY 5 - 31th March 2023

Day 5 Erasmus+Project 'Rangers Of Change'

Students from all partner schools, coordinated by their teachers, have successfully contributed to the planting of more than 3 billion trees!

<https://mapmytree.eea.europa.eu/#/action/details/ctz/1236>

On Friday, 31st March, school teams took part to workshop on ROC activities to implement ROC project; coordinator awarded certificates; "Plant a tree to feel free" campaign involved students, local community, teachers and it proved to be a great socializing activity.

ROC students disseminated our Erasmus+project at the Embassy of Lithuania, honoured by the invitation of His Excellency, Mr Donatas Augulis.

<https://youtu.be/BiG0mk25Jls?feature=shared>

<https://youtu.be/X6R57ap4Ttw?feature=shared>

RANGERS OF CHANGE IN ROMANIA

DAY 1 - 27th March 2023 - GALLERY



BUCHAREST, ROMANIA

RANGERS OF CHANGE IN ROMANIA

DAY 2 - 28th March 2023 - GALLERY



BUCHAREST, ROMANIA

RANGERS OF CHANGE IN ROMANIA

DAY 3 - 29th March 2023 - GALLERY



BUCHAREST, ROMANIA

RANGERS OF CHANGE IN ROMANIA

DAY 4 - 30th March 2023 - GALLERY



BUCHAREST, ROMANIA

RANGERS OF CHANGE IN ROMANIA

DAY 5 - 31th March 2023 - GALLERY



BUCHAREST, ROMANIA

2.1 ROC Mini-dictionary:

(in English and the languages of each partner school) of words (and their definition) related to climate change and a few idioms to describe weather-suggestion: students in each school, coordinated by their teachers, wrote ROC Mini-dictionary in their own language and translated it in English.

words: https://docs.google.com/spreadsheets/d/1NPJqBSGTT4zciYMtMoQzSc_BIcHohMvf/edit?usp=sharing&ouid=111123645276146390515&rtpof=true&sd=true

phrases: <https://docs.google.com/spreadsheets/d/1sz-ZCc0kpfEF1ai82oNE60toZ-JRSK7O/edit?usp=sharing&ouid=111123645276146390515&rtpof=true&sd=true>

2.2 ROC True stories:

Students in Romania imagined they were journalists and wrote articles based on true stories that have already happened. They did some research, they found true stories that had happened because of extreme weather phenomena: unusual places for extreme weather phenomena that occurred in their country; farming/agriculture/famine/ clear water scarcity/ endangered animals/ migration of people and animals:

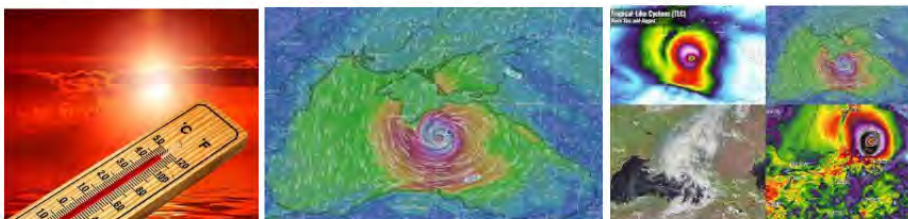
Extreme temperature and precipitation in Romania

Motto: *Get used to "extreme" weather, it's the new normal.--Connie Hedegaard*

Climate change (CC) in the last few years has become a subject of major interest for different levels of society. Flaming-hot heat and torrential rains has become familiar to the Romanians. Nevertheless, when the two weather phenomena came one after the other, or in some cases even overlap, inconvenience followed naturally.

One case of extreme weather, where two people died was in the middle of June, 2021. That week had extreme weather events, such as tornado-like phenomena caught in Dobruja; that ended on an even more severe note. A cyclone was formed in the Black Sea and brought storms and heavy rainfall in Romania, but especially in the eastern half of Romania. There where entire localities flooded, including parts of Bucharest, significant material damage. These are, in short, the effects of the cyclone. The magnitude of the weather phenomenon has been termed as unprecedented for the last years in Romania.

The extra-tropical cyclone are the structures that have a cold front and a warm front, so they are structures that can happen at any time throughout the year and can produce precipitation, intense wind gusts, which are normal phenomena.



CHIREA TUDOR

DUȘE DAMIAN

PANAIT VLAD

HAIL AS AN APPLE

Extreme weather events are occurring more often and are frequently attributed to climate change.

On July 15, 2021, an extreme weather phenomena occurred in the locality of Baita, Hunedoara County.

From what the locals say, nothing predicted what followed. It was a sunny summer day. Suddenly, the sky darkened and a strong storm began.

It was raining torrentially, but the real problem was the very large hail.

The locals say that they have never seen such a big hail : the hail was as big as an apple.

All the people ran to hide and tried to shelter their animals as well.

The hail caused great damage: windows were broken, roofs were punctured, vegetable gardens were destroyed, households were flooded and several trees fell.

After months of drought, torrential rains produced floods.

But people were happy that no one was hurt and hope that something like this will never happen again.



Living with climate change

by Pavel Mogage, Tudor Ruse and Mihai Jugureanu

In common usage, climate change describes global warming — the ongoing increase in global average temperature — and its effects on Earth's climate system. Due to some major problems such as: fossils, fuel use, deforestation, pollution in big cities, Earth climate changes faster than previous years: deserts are expanding, heat waves and wildfires are becoming more common, storms become more devastating.



In 2019, approximately 1,7 million cubic meters of forest (meaning the surface of 7.000 football fields) were devastated in Romania by the extreme weather phenomena such as: natural fires, extreme winds, trees dryness, snow breaks or insect attacks. All these had devastating effects, because the Forest Management in Romania hasn't yet taken any measures to adapt to climate change.

Because of forest loss, in Oltenia a strange phenomenon appeared: the Sahara of Oltenia.

It is an area of approximately 800 km², which spreads from the city of Calafat to the city of Dăbuleni. It is the result of the process of desertification, meaning that this area is becoming a desert. Tens of years ago, forests would cover the area where the desert now spreads. One of the farmers who lives here said in an interview to Digi 24 that nowadays they are cultivating African beans, sweet potatoes and peanuts. He and his neighbors are absolutely sure that they are never going to cultivate corn and wheat again because of the way that weather is changing.





In the same interview, an old man who lived in the same area that now is covered by the desert was very sad because all his life's work, his house, his garden and his farmland were ruined. He told the reporters that he couldn't breed animals anymore and that he couldn't do anything to change things back how they used to be, so he had to move away from the

place where he had lived all of his life.

In conclusion, not only the Earth, but also Romania is changing and it's up to us to protect our planet for ourselves and for the people who will live after us.

2.3 ROC Haiku on climate change

haiku (Japanese poem) on the topic of climate change-each participant school contributed with 5 haiku poems to the Climate Action Book. A haiku is a short, unrhymed poem that adheres to a specific three-line, seventeen-syllable format. The form originated in Japan, but today people across the globe read and write haiku in many different languages:

1. Ice melts, seas rising,
Nature's voice in disarray,
Earth's cry unheard, lost. (Ilinca Anghelescu)



2. Heat waves scorch the land,
Forests burn, life fades away,
Climate's plea ignored (Cristian Melinte)

3. Rising seas engulf,
Nature's cry echoes unheard
Melting world, we weep.(Victor Nastac)



4. We pollute our planet daily.
The earth is crying for our help!
Let's do something about this! (Daria Neamtu)



5. Trees whisper warnings
Storms rage with a fierce vengeance,
Mother Earth cries out. (Alex Iacob)

2.4 ROC Music explores climate change

Collection of Songs- composed to protect nature and to raise awareness on climate change. Each partner school contributed with 3 songs, sung in their own language and translated in English- to raise awareness on climate change. Music, painting, sculpture were interconnected in ROC project activities and results, they created a suggestive impact, as art is a form of raising awareness about climate change. Our results involved the building of new collaborations between the partner schools and key organizations, that supported long-term growth of raising awareness about the role of art, which had a stronger impact and was very suggestive for raising awareness about climate change:

1 "Nature and ecology" Song: https://youtu.be/VW_CJV9FyK8?si=5xJ3Qh9CIchfMhT

Lyrics in Romanian:

1. La coșul de gunoi, Hârtii să aruncați Nici sticle sau mâncare, Pe jos să nu lăsați! Să nu călcați nici iarba, Nu rupeți florile Căci în natura verde, Ne sunt comorile! (Refren):
2. Sunt coșuri pentru sticle, Pentru hârtii și plastic Dacă le-ați respecta Ar fi ceva fantastic! Dacă se reciclează În lumea noastră totul, Salvăm păduri, oceane Și-acesta ne e scopul! (Refren):
3. Opriți eroziunea! Un copăcel ne-nvață C-atunci când îl plantăm, Sădim o nouă viață! Și nici poluare nu vrem, Nici spray-uri cu freon Căci toată lumea știe, Distrug stratul de-ozon!

(Refren): Mama Natura așa ne-a învățat Cum să trăim mai bine, mai curat Prin frumusețea ei ne-a îndemnat S-o cântăm, copiii! Câmpii-nverzite, în mii de culori Mări cristaline și grădini de flori, Păduri cu păsări și-animale vii, Le dorim, copiii!

Lyrics in English:

1. At the garbage bin, Throw away papers, Nor bottles or food, Do not leave on the ground! Do not trample the grass, Do not pick the flowers, For in the green nature, Our treasures lie!
2. There are bins for bottles, For papers and plastic. If you respected them, it would be something fantastic! If everything is recycled In our world, We save forests, oceans And this is our goal! (Chorus):

3. Stop erosion! A tree teaches us, when we plant it, We plant a new life! And we don't want pollution either, Nor freon sprays Because everyone knows, They destroy the ozone layer!

(Chorus): This is how Mother Nature taught us How to live better, cleaner. Through its beauty, it urged us to sing it, children! Green fields, in thousands of colours. Crystalline seas and flower gardens, Forests with birds and living animals, We wish them, children!

2 - "A tree with flowers" Song: https://youtu.be/Yx9tkxTcCGM?si=NrWoK_MDE8lv7dlK

Lyrics in Romanian:

Când privesc spre voi ades,
Pe pământ eu mă visez
Că sunt un copac cu flori;
Și la drumul mare ies
C-un surâs de frunze verzi
Să vă-mbrățișez în zori.
Unii trec mereu grăbiți
Și nu văd că înfloresc
Pentru ei adeseori;
Însa cei îndrăgostiți
Și copiii se opresc:
„Uite un copac cu flori.”

(Chorus): *Un copac cu flori
Și un colț uitat de cer
Un copac cu flori
Este tot ce vă ofer
Un copac cu flori
Să vă pot îmbrățișa
Un copac cu flori
Asta este viața mea*

Lyrics in English:

When I often look to you,
I dream myself on the earth
That I am a tree with flowers;
And on the big road I go out
With a smile of green leaves
To embrace you at dawn.
Some people are always in a hurry
And they don't see me blooming often for them;
But those in love and the children stop:
"Here is a tree with flowers."

(Chorus): A tree with flowers
And a corner forgotten by the sky
A tree with flowers
That's all I have to offer
A tree with flowers
To be able to hug you
A tree with flowers
This is my life

3. "Nature is wonderful"! Song: <https://www.youtube.com/watch?v=AVVteekjpH0>

Lyrics in Romanian:

Munți înalți, domoale dealuri
rauri repezi mari cu valuri
lanurile din campie, cânt voios de ciocarlie
ce este natura oare ? este tot ce ne înconjoară
tot ce vezi din zori in seara, fantezie și culoare
eu în toate as vrea sa fiu ca sa pun în tot ce e viu

Lyrics in English:

High mountains, Gentle hills,
Fast rivers, Seas with waves,
Fields in the plains, Joyful song of the skylark,
What is nature, I wonder? It's everything that surrounds us,
Everything you see from dawn to dusk, Fantasy and color,
I would like to be in everything, To infuse life into all that exists.

2.5 ROC Articles / PPTs with topics:

LIGHT BULB MONDAY

By Stefan Elefterescu

"Light Bulb Monday" uses ingenious techniques to save electricity costs, igniting a movement in energy saving. Adopt LED bulbs to light your room more efficiently; they use 75% less energy than conventional incandescences. Use smart home technologies to automate lighting, which enable scheduling and remote control to cut down on wasteful use. By installing mirrors in the right places, you can maximize natural light and lessen the need for artificial lighting. Invest in energy-efficient appliances and turn off electronics when not in use to maximize appliance usage. To find and get rid of items that consume a lot of electricity, conduct an energy audit. Promote a "power down" ritual to make sure all electronics and lights are turned off at the end of the day.

Furthermore, educate yourself and others about the advantages of renewable energy sources such as solar panels or wind turbines, which can significantly reduce reliance on fossil fuels and carbon emissions. When it comes to electricity generation, there are a lot of options out there. But when it comes to renewable energy sources, solar panels and wind turbines are two of the most popular. And for good reason – they can significantly reduce our reliance on fossil fuels and carbon emissions.

But what exactly are the advantages of solar panels and wind turbines? Let's take a closer look:

Solar Panels

1. Solar panels are a clean and renewable source of energy. They don't produce any harmful emissions or pollutants, making them a great option for those who want to reduce their carbon footprint.
2. Solar panels are very efficient. They can convert a high percentage of the sun's rays into usable energy, making them a great way to generate electricity.
3. Solar panels are low maintenance. Once they're installed, they require very little upkeep. And since they don't have any moving parts, there's very little that can go wrong with them.
4. Solar panels are versatile. They can be used to power homes, businesses, and even cars. And with the advancement of solar technology, they're only going to become more versatile in the future.
5. Solar panels are cost-effective. They provide a great return on investment and can save you money on your energy bills in the long run.

Wind Turbines

1. Wind turbines are also a clean and renewable source of energy. Like solar panels, they don't produce any harmful emissions or pollutants.
2. Wind turbines are very efficient. They can convert a high percentage of the wind's energy into usable electricity.
3. Wind turbines have a small footprint. They don't take up a lot of space, making them a great option for those who want to reduce their impact on the environment.
4. Wind turbines are low maintenance. Once they're installed, they require very little upkeep. And like solar panels, they have very few moving parts, so there's little that can go wrong with them.
5. Wind turbines are cost-effective. They provide a great return on investment and can save you money on your energy bills in the long run.

As you can see, there are a lot of advantages to using solar panels and wind turbines. If you're looking for a clean and renewable source of energy, these are two great options to consider.

ECO-ANXIETY

By Andrei Enache

In the year 2017, the American Psychological Association (APA) and ecoAmerica coined the eco-anxiety definition as a "Chronic fear of environmental doom".

In the last decade, there has been significant research on the impact of ecological disasters on mental health, and more symptoms have been reported in just the past three years. Specific fears include concerns about pollution, deforestation, floods, extinction and lack of access to food.

How to prevent eco-anxiety:

-Focus on what you can control. Climate change is a very complex issue that many people don't understand.

-Take a break from climate news. You can stop watching the news about climate change since hearing the bad news that happen around the world could make the eco-anxiety worse.

-Get involved in all the things that are happening.

-Be patient with yourself and others. Try to connect more with nature.

-We should try harder to get ourselves involved in different campaigns about eco-anxiety and we should use means of transport that don't use too much harmful gas for our earth, we should recycle more for our planet to remain clean and green.

-Everything that happens in this moment on earth, pollution and climate changes affect people's lives and we must do whatever is in our power to prevent that from happening.

Save the Earth!

By Ana Bulumac

In the 21st century, our generation faces a critical moment, as our actions shape the planet's future, with climate change, deforestation, and pollution, which represent significant challenges.

Human activities, especially methods of consumption and burning of fossil fuels, lead to environmental degradation, contributing to the destruction of habitats and the loss of biodiversity.

Deforestation worsens the state of our planet, emphasizing the need to conserve forests. Thus, people reaching the conclusion that new forests must be planted, introducing in schools projects related to the topic of saving the planet and adapting renewable energy.

Policy changes and global collaboration are vital for sustainable practices. Community engagement, through grassroots movements and local initiatives, fosters environmental responsibility.

It is not too late to alter our course, and through sustainable practices, renewable energy promotion, education, policy advocacy, community involvement, we can mitigate environmental impact, ensuring a more sustainable legacy for future generations.



2.6 ROC Water Poems

Romanian students wrote poems for the campaigns of cleaning waters in their community/ district/ town/ country, involving the help they got from families, friends, NGOs to clean plastic from waters. In their poems, children wrote about solutions to help waters to get cleaner and without plastic. On World Water Day (March, 22nd) students mitigated on clean water in the world, on efficient ways to stop wasting water, finding ways to supply water to underprivileged groups. ROC students created posters, wrote petitions, inviting government, politicians to work plans for each issue . They organized Water Photography Competition and Water Poems competition in each partner school.

Water poem

By Bradis Radu and Mogage Pavel

I drink water every day,
 Stop throwing rubbish in the lake,
 I like water very much,
 But not any child has too much,
 Mother helps me every day,
 To reduce the water waste,
 If you keep the rivers clean,
 Fresh water has no taste.
 Every household should have clean water,
 For every cat and every dog
 If you want to find out more,
 Join us on United Nations Conference



Save the Sea

By Ana Margineanu

Save the sea and save the Blue Planet.
 Seas are everything for our world.

Here from the sea,
 We get everything
 For you and for me.

For a healthy life
 We need fresh air
 And clean waters,
 So help the seas as much as you can.

Plastic water is toxic
 For me and also for you.
 So let's protect our environment
 With every little thing we can do





World Water Day - We Help the Rivers/Lakes/Sea

By MIHĂILĂ LUCĂ ȘTEFAN and RUSE
TUDOR ANDREI

Water is what sustains life.
Owning it shouldn't be a struggle.
Rain and seas and lakes don't suffice
Liter by liter we waste it like it doesn't matter.
Do your dishes with just a little splash,
Wash your body, but don't keep it flowing,
Always water plants, but only a flash,
Turn off the water while cleaning or hoeing.
Even when cooking you need to act right.
Rinse your dishes but remove every crumb
Don't use the drain, use the trash tonight
And remove the oil, recycle, get it done.
You've got this, continue the fight.

Love my city, Bucharest,
The culture, the people and all the rest.
What I don't love is pollution,
We really need to find a solution.
Dâmbovița is a mess,
It's filthy and full of waste.
When you go to Cișmigiu,
The lake isn't the best view.
Herăstrău could be a hoot
But its waters are no good.
Come with me, let's clean it all,
Lakes and rivers, streams and more.
Come with me, my dear friend,
Bring your mother, brothers, friends,
Help me, please, to clean this city
Together, we'll make it pretty
Also safe for me and you
I promise it'll feel good.

BUCHAREST, ROMANIA



World Water Day

By DUȘE DAMIAN and GUTILA ANDREI

Clean water is a precious resource,
A treasure we must cherish without remorse,
Let's mitigate the waste and pollution we've made,
Efficient ways we must find, before it's too late,
To bring clean water to every underprivileged group,
For water is essential, without it life would droop,
Let's work together to conserve and preserve,
For a better future, for all to deserve..
Water flows in streams and brooks,
It fills up lakes and babbling nooks.
From mountains high to the seas below,
It brings life and growth wherever it flows

2.7 ROC Green Shopping Guide

Containing lists/ideas/short articles written by ROC students, with things to buy, green thinking ideas-each participant team had their own idea for this guide structure:

<https://docs.google.com/presentation/d/1wTshbZYvtiYf7Qw91Kol19Ds0RJifext2fmVv0C4OOs/edit?usp=sharing>

<https://docs.google.com/presentation/d/1fTTL9z6JR2L8r5jBdbx880k3TV2KgrCWQmVNAZX7CWQk/edit?usp=sharing>

<https://docs.google.com/presentation/d/1I7Esr0OA3lz9QgNO-idUKykTX5srxRk9/edit?usp=sharing&ouid=101433296967932978460&rtpof=true&sd=true>

https://drive.google.com/file/d/1ePrTBZu8lM5sEagU8dR_xbEjfp42O4BI/view?usp=sharing

<https://drive.google.com/file/d/1VPD9JG-FsxWZ8looLylnwn8kA7upuhK/view?usp=sharing>



GREEN SHOPPING GUIDE

By: Radu & Pavel

Chapter 1 List of fruits & vegetables

Fruit and vegetables contain a large range of vitamins, minerals, fiber and antioxidants. Research shows that people who eat plenty of fruit and vegetables daily are healthier and happier. These can be fresh, frozen or canned.

The World Health Organization (WHO) recommends eating at least 400 g of fruits and vegetables per day. Fruits are a healthy choice at any time of the day.



At breakfast:

- you can add sliced bananas, raisins, sliced apricots, sliced peaches, carrots, cucumbers, peppers, berries, pineapple or nuts, along with whole grains, in milk or plain yogurt;
- we must eat whole fruits, but we can also drink fruit juices;
- we can add chopped vegetables, such as onions, bell peppers, tomatoes, spinach to the eggs;
- fresh fruit sandwich - avocado.

At lunch

- we can choose a green salad with vegetables: cucumbers, sliced tomatoes, bell peppers, carrots, broccoli;
- we can have a vegetable soup: with potatoes, celery, carrots, peppers, onions, parsnips, zucchini, or as a main course: peas, beans, cauliflower, potatoes;
- for dessert: dried fruits, such as raisins, dates or unsweetened apricots and dry roasted nuts, such as pecans, almonds and walnuts, but also fresh fruits: grapes, cherries, oranges and bananas, apples, pears, grapefruit, kiwis, mangoes (depending on the season);
- fresh herbs can be used: basil, cilantro, mint, oregano, parsley, rosemary, thyme.



At dinner

- various vegetables can be baked or cooked in the oven: sweet potato, asparagus, peas, leeks, tomatoes or mushrooms;
- can mix frozen or leftover cooked vegetables such as: peas, beans, lentils, chopped asparagus or sliced mushrooms, halved Brussels sprouts with cooked brown rice.

Chapter 2

Healthy things to buy in order to eat healthily, green thinking ideas against food waste

The food choices we make have an impact: on our health, but also on the environment. We need to be careful about the types of food we buy and eat, but also how we use them in our diet and the impact of food on the environment.

Use **the rule**: LOOK, BUY, KEEP, COOK:

- LOOK at what's in the fridge and pantry before you go shopping;
- BUY only what you need — make a shopping list and stick to it;
- KEEP food properly so that it does not spoil;
- COOK leftovers too.



Buy less - Check your fridge and pantry before going grocery shopping.

Plan meals ahead - Know the foods and quantities you actually need.

Make a grocery list - This also saves you time and money.

Organize your fridge and pantry.

Store food appropriately - Read the food labels and store items accordingly.

Let's buy fresh ingredients more often in smaller quantities so we waste less.

Let's make perishable food a priority! - we need to buy them in smaller quantities and more frequently.

GREEN SHOPPING GUIDE

Fruit and vegetables contain a large range of vitamins, minerals, fiber and antioxidants. Research shows that people who eat plenty of fruit and vegetables daily are healthier and happier. These can be fresh, frozen or canned. The World Health Organization (WHO) recommends eating at least 400 g of fruits and vegetables per day. Some fruits and vegetables that are best to consume at breakfast are: bananas, carrots, avocados or nuts.



At lunch, you can have a variety of dishes made from fruits and vegetables, like vegetable soup with potatoes, celery, carrots, but also a green salad with vegetables cucumbers, sliced tomatoes, bell peppers, carrots.

For dinner you can have raw fruits and vegetables, or you can have some baked or cooked in the oven, like sweet potato, asparagus, peas, leeks, tomatoes or mushrooms.



A good way to reduce food waste is to use the LOOK, BUY, KEEP, COOK rule, which requires you to follow some simple steps.

In conclusion, food waste can be stopped, while also having a healthy diet and so, a healthy body and mind.



2.8 ROC Diary

Romanian students, working in groups of 3, wrote down all things they did to help the environment for one week (7 days), from Monday to Sunday:

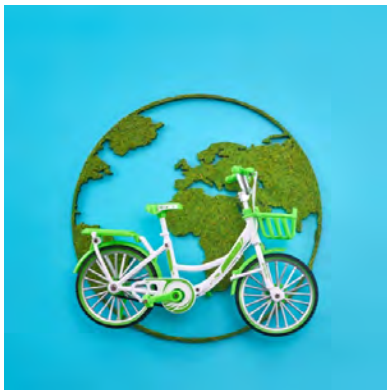


Monday: Reduce Energy Consumption

1. Turn off lights and electronics when not in use.
2. Unplug chargers and appliances that are not in use.
3. Use energy-efficient LED bulbs.

Tuesday: Waste Reduction

1. Bring a reusable water bottle and coffee cup.
2. Avoid single-use plastics – say no to straws and bring your own shopping bag.
3. Start a compost bin for organic waste.



Wednesday: Eco Transport

1. Walk, bike, carpool, or use public transportation instead of driving alone.
2. Plan your errands efficiently to reduce unnecessary trips.
3. Consider telecommuting or working from home if possible.

Thursday: Water Conservation

1. Take shorter showers and turn off the tap while brushing your teeth.
2. Fix any leaky faucets or toilets in your home.
3. Collect rainwater for watering plants.





Friday: Local and Sustainable Support

1. Buy local and seasonal products.
2. Choose products with minimal packaging.
3. Research and support companies with eco-friendly practices.

Saturday: Eco-Friendly Lifestyle

1. Switch to reusable or biodegradable personal care products.
2. Opt for eco-friendly cleaning products.
3. Reduce meat consumption or try a plant-based diet for the day



Sunday: Appreciate nature.

1. Spend time outdoors and appreciate nature.
2. Participate in a community clean-up or environmental event.
3. Educate yourself on local environmental issues.

Remember, these actions can have a cumulative impact over time. Feel free to adapt the plan based on your lifestyle and circumstances. Additionally, encouraging others to join you in these efforts can amplify the positive impact on the environment.

2.9 ROC My proposal for my headmaster

Students in each partner school presented specific arguments in favour of their proposal on taking climate action, on environmental and sustainable education, deciding on a logo/ motto for their proposals, actions/campaigns/activities with teachers & students, parents, local community:

My proposal for my Headmistress

By: Bolma Sofia and Serban Maria

'Green-School'

Green-School is one school week, but with different topics than usual, they take place in different places!

What do we learn?

- about nature and how to protect it, how to respect and how to clean it!
- about plants, how to grow them, how to take care of them
- how to take care of the world that we live in!

Why is this important?

- This will help children learn about the beautiful world they live in and how they can make it a better place!
- They will learn how to work in teams and how to listen to everybody's ideas!
- They will be more careful with plants, animals and other children, they will spread the word to other people!
- The endless opportunities of making new friends and learning how to communicate are always there!

Who can participate?

- No matter how old you are, you should know how to treat the planet you are living in!
- Every kid, adult, elderly person needs to know how to clean after themselves and how to behave with nature and other living being!

Where is it?

The activities will always be outside in nature, in the park, on the beach or in a forest!

Our motto/logo:

'Small hands can change the world!'



Eco 195

By: Andrei Gutila, Andrei Pop, Voica Tudor Octavian

Digital Solutions

- Digital Documents and Communication:
 - Implement e-books and online resources in the curriculum.
 - Use digital platforms for assignments, reports, and communications.
- Paperless Administration:
 - Transition to electronic records and digital filing systems.
 - Use online forms and e-signatures for administrative processes.
- Reduce Printings:
 - Encourage double-sided printing when necessary.
 - Limit the use of paper by promoting cloud storage solutions.
- Benefits:
 - Reduces paper waste and conserves natural resources.
 - Cuts down costs associated with printing and paper supplies.

Harness Solar Energy

- Installation of Solar Panels:
 - Place solar panels on school rooftops or open areas.
 - Consider both photovoltaic and solar thermal options.
- Energy Efficiency:
 - Use solar energy to power lights, computers, and other electronic devices.
 - Integrate solar water heating systems where applicable.
- Educational Opportunities:
 - Incorporate solar energy projects into the science curriculum.
 - Offer hands-on learning experiences about renewable energy.
- Benefits:
 - Reduces reliance on non-renewable energy sources.
 - Lowers electricity bills and reduces the school's carbon footprint.

Promote Active Transportation

- Safe Routes and Infrastructure:
 - Develop safe biking and walking paths to and from school.
 - Install bike racks and repair stations on campus.

Programs and Incentives:

Create "Bike to School" days and walking clubs.

Offer rewards and recognition for students and staff who regularly bike or walk.

- Health and Environmental Impact:

- Educate on the health benefits of regular physical activity.
- Highlight the reduction in traffic congestion and pollution.

- -Benefits:

- Fosters a healthier lifestyle and community.
- Reduces carbon emissions and reliance on vehicular transport.

Planning and Design:

- Planning and Design:

- Choose a suitable location with adequate sunlight and water access.
- Plan the layout considering a variety of plants (vegetables, fruits, flowers).

- Student and Community Involvement:

- Integrate garden activities into the curriculum (science, nutrition, sustainability).
- Involve students, parents, and local volunteers in the gardening process.

- Sustainability Practices:

- Use composting systems to recycle organic waste.
- Implement rainwater harvesting for irrigation.

- Benefits:

- Provides hands-on learning experiences about ecology and agriculture.
- Supplies fresh produce for the school cafeteria or local community.

Implement Comprehensive Recycling:

- Placement and Accessibility:

- Place recycling bins in classrooms, hallways, cafeterias, and outdoor areas.
- Ensure bins are clearly labeled for different types of recyclables (paper, plastics, metals).

- Education and Awareness:

- Conduct educational sessions on the importance of recycling.
- Use signage and posters to guide proper recycling habits.

- Waste Management Program:

- Partner with local recycling facilities for regular collection.
- Monitor and evaluate recycling efforts to improve efficiency.

- Benefits:

- Reduces landfill waste and conserves natural resources.
- Encourages a culture of environmental responsibility within the school community.

CHAPTER 3



ERASMUS RANGERS OF CHANGE IN SPAIN



24th -28th April 2023



Work package n°4 – Take action!

Make a change! Buy less! Recycle! - Mobility in Tomelloso,

153 participants

Work package n°4 – Take action! Make a change! Buy less! Recycle! -Mobility in Tomelloso, Spain: 24th -28th April 2023 153 participants

Our Erasmus+ Project “Rangers Of Change has continued its 2nd mobility of Work Package No 4-“Take action! Make a change! Buy less! Recycle! “. Our students welcomed their colleagues from partner schools in Greece, Lithuania, Portugal and Romania.

RANGERS OF CHANGE IN SPAIN

DAY 1 - 24th April 2023

On Monday, 24th April 2023 teachers & students from Greece, Lithuania, Portugal and Romania were welcome at Instituto de Enseñanza Secundaria Eladio Cabañero, and worked together to integrate education for sustainable development in school curriculum, linking themes of recycling to economy, society, culture, education, heritage, health, social inclusion. Students debate on the advantages of buying seasonal products at the local farmers’ market. Participants report on the benefits of shopping at a farmers’ market.

Waste Management and Recycling workshop-participants inform teenagers, communities; change attitudes and practices for environmental protection; they acquire skills, attitudes through practical, interactive activities, using experiential learning.

Workshop on human activities and their impact on our landscape at Museo López Torres in Tomelloso and old windmills in Campo de Criptana: Human activities and their impact on our landscape at old mills in Campo de Criptana were discussed by participants, who got complex learning experiences, combining non-formal, informal education, respecting principles for sustainable development (Student-centered, Critical Thinking, Systemic Thinking, Partnership, participation). They connected to real lives of children and communities, finding solutions that were action-oriented.

Participants were honoured and grateful to talk about ROC Erasmus+project's aims with Her Excellency Mrs.Florenta Ciobotaru, from Consulate of Romania, at Institute Eladio Cabanero in Tomelloso, during Waste Management & Recycling workshop

DAY 2 - 25th April 2023

Day 2: teachers and students worked on project goals face to face and discussed project issues. In Toledo, at Palacio de Fuensalida, participants had a meeting with the Minister for Sustainable Development in Castilla-La Mancha. They linked themes of environmental protection of economy, society, culture, education, heritage, health, social inclusion; taking positive action helps reduce anxiety and powerlessness

Workshop- Toledo and medieval globalization: participants made their campaigns public, encouraged people to think smart, reuse, recycle before buying. They met specialists and talked about causes of globalization, how to manage it. Students talked to people at risk of climate-related extreme weather on the impact on environment.

Experiential activity: "The Green Walk"- A path along the Tagus River-a new perspective of the city: students'creativity finds solutions to reinvent, reuse. Their campaigns respond to environmental issues using strategies, helping, sharing information, providing support, encouragement. Students wrote down things they do to help the environment. They practised on environmental issues using their own actions, keeping personal connections with places, maintaining cultural ties.

Students presented ideas, viewing problems as solvable, making achievable goals, moving towards them.

<https://www.facebook.com/1143743259/videos/3087594324880112/>

<https://www.facebook.com/1143743259/videos/975049843851687/>

DAY 3 - 26th April 2023

Taking action & project dissemination at the European Parliament Office in Madrid-Agenda 2030 for Sustainable Development and environmental education. Participants initiated activities, campaigns, workshops that provided benefits by informing, changing attitudes, acquiring skills, using experiential learning. During ROC common activities students practised and improved their level of English, they learnt to find and sustain specific arguments, learnt to persuade people to take action on recycling; to communicate and measure what matters to ROC project.

Students made a change in nature through art & green spots in Madrid- Sustainable Development& environmental education; at the end of each activity, they quantified the success rates of it by reading the evaluation reports, surveys, reporting them to ROC objectives, deciding what changes may be required for future activities to keep the project moving in the right direction.

DAY 4 - 27th April 2023

Taking action to Lagunas de Ruidera Natural Park-observing & collecting data and environmental education. Students decided that planning and achieving are the most important parts of this movement management.

Students worked through all the details and requirements in order to reduce the risk of rework and possible trouble later.

Organizers planned a variety of practical, interactive activities, using experiential learning. ROC students were trained to have a healthy degree of optimism, that help them grow and adjust after experiencing stressful events, natural disasters.

They learnt to reframe things in a positive way, handling environmental issues better.

DAY 5 - 28th April 2023

Workshop- Make a change on economic sustainability& environmental education at the biggest winery in Europe, that reuses crushed grapes to produce glass, washing powder, fertilizers. Specialists were involved in delivering ROC workshops, in order to transform every ROC workshop into a high-performing activity that delivers significant value. Specialists helped to establish a shared vision, reduced the risk of missed objectives and misunderstandings, increasing the workshops' chance of success. Frequent and effective communication was an important aspect in ROC management, especially during mobilities' workshops. ROC Certificates award at IES Eladio Cabanero, Tomelloso,Spain proved to all participants that We are the Green Change!

<https://youtu.be/AnesL9YFZSs?feature=shared>

<https://fb.watch/oy2eMDGu3r/>

<https://fb.watch/oy2x0znj8L/>

<https://fb.watch/oy2zHhZ4Qq/>

<https://fb.watch/oy2B1P39NH/>

<https://fb.watch/oy32nnvGpj/>

<https://fb.watch/oy34Sx48c-/>



RANGERS OF CHANGE IN SPAIN

DAY 1 - 24April 2023- GALLERY



SPAIN

RANGERS OF CHANGE IN SPAIN

DAY 2 - 25 April 2023- GALLERY



SPAIN

RANGERS OF CHANGE IN SPAIN

DAY 3 - 26 April 2023- GALLERY



SPAIN

RANGERS OF CHANGE IN SPAIN

DAY 4 - 27April 2023- GALLERY



SPAIN

RANGERS OF CHANGE IN SPAIN

DAY 5 - 28April 2023- GALLERY



SPAIN

3.1 ROC Mini-dictionary:



Co-funded by
the European Union

2022-1-RO01-KA220-SCH-000085133



ROC MINI-DICTIONARY

CLIMATE CHANGE AND EXTREME WEATHER

IES Eladio Cabañero

Tomelloso, Ciudad Real-SPAIN

| ROC MINI-DICTIONARY | | |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| CLIMATE CHANGE-EXTREME WEATHER | | |
| GLOSSARY | | |
| ROC | DEFINITION | SPANISH |
| ACID RAIN | Rain that contains large amounts of harmful chemicals as a result of burning substances such as coal and oil | LLUVIA ÁCIDA |
| ALBEDO EFFECT | The ability of a surface to reflect sunlight. | EFECTO ALBEDO |
| ATMOSPHERE | Thin gas layer which surrounds the Earth. | ATMÓSFERA: |
| ATMOSPHERIC CLIMATE | It represents the state of the atmosphere in a determined moment and location, in a short time scale and is determined by the atmospheric conditions. | CLIMA ATMOSFÉRICO |
| BIODEGRADABLE | Able to decay naturally and in a way that is not harmful: | BIODEGRADABLE |
| BIOMASS | The amount of matter stored in an organism, trophic level or ecosystem. It is measured in units of mass per unit area or volume. | BIOMASA |
| BIOSPHERE | The worldwide sum of all ecosystems. It can also be termed the zone of life on Earth. | BIOSFERA |
| CARBON FOOTPRINT | Someone's carbon footprint is a measurement of the amount of carbon dioxide that their activities produce. | HUELLA DE CARBONO |
| CLIMATE | It refers to the average of atmospheric climate values that are found repeatedly in an exact place, in a long-term time scale (30 or more years) | CLIMA |
| CLIMATE CHANGE | Changes in the world's weather, in particular the fact that it | CAMBIO CLIMÁTICO |

| | | |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| | is believed to be getting warmer as a result of human activity increasing the level of carbon dioxide in the atmosphere | |
| CLIMATE MODEL | Numerical climate models use quantitative methods to simulate the interactions of the important drivers of climate, including atmosphere, oceans, land surfaces and ice. | MODELO CLIMÁTICO |
| CHLOROFLUOROCARBONS | Gases made up of carbon, hydrogen, chlorine and fluorine. Can be found in aerosol sprays. These were illegalised in the EU as they have a huge negative impact on the environment. | CLOROFLUOROCARBONOS |
| CYCLONE | A violent tropical storm. | CICLÓN |
| DEFORESTATION | The cutting down of trees in a large area, or the destruction of forests by people. | DEFORESTACIÓN |
| DESERTIFICATION | The process by which land changes into desert, for example because there has been too much farming activity on it or because a lot of trees have been cut down. | DESERTIZACIÓN |
| DROUGHT | A prolonged period of abnormally low rainfall, leading to a shortage of water. Drought is a recurring feature of the climate in most parts of the world, becoming more extreme and less predictable due to climate change. | SEQUÍA |
| ECOLOGICAL FOOTPRINT | One's population's ecological footprint can be defined as the total quantity of sea and land space needed to produce all resources consumed by that population. | HUELLA ECOLÓGICA |
| ECOSYSTEM | All the living things in an area and the way they affect each other and the environment. | ECOSISTEMA |
| FLOOD | A large amount of water covering an area that is usually dry. | INUNDACIÓN |
| GLACIER | It is a persistent body of dense ice that is constantly moving under its own weight. A glacier forms where the accumulation of snow exceeds its ablation over many years, often | GLACIAR |

| | | |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|
| | centuries. | |
| GLOBAL WARMING | The increase in temperature of the earth's atmosphere that is caused by the increase of particular gases, especially carbon dioxide. | CALENTAMIENTO GLOBAL |
| GREENHOUSE GAS | Gases that cause Greenhouse Effect by emitting infrared radiation which causes heat. Some of these gasses are H ₂ O, CO ₂ and CH ₄ . | GASES DE EFECTO INVERNADERO |
| HEATWAVE | A period of time such as a few weeks when the weather is much hotter than usual | OLA DE CALOR |
| METHANE | It is a chemical compound with the chemical formula CH ₄ (one carbon atom bonded to four hydrogen atoms). It is a group-14 hydride, the simplest alkane, and the main constituent of natural gas. | METANO |
| NITROUS OXIDE | It is a chemical compound, an oxide of nitrogen with the formula N ₂ O. At elevated temperatures, nitrous oxide is a powerful oxidiser similar to molecular oxygen. Being the third most important long-lived greenhouse gas, nitrous oxide also substantially contributes to global warming. | ÓXIDO NITROSO |
| OZONE LAYER | A layer of air containing ozone high above the earth that prevents harmful ultraviolet light from the sun from reaching the Earth. | CAPA DE OZONO |
| PERMAFROST | Thin ice layer located in the cold Earth zones not very deeply buried in the soil that contains undecomposed organic material. The defrosting of this layer would cause greenhouse gasses. | PERMAFROST |
| POLLUTION | Damage caused to water, air, etc. by harmful substances or waste. | POLUCIÓN/ CONTAMINACIÓN |

| | | |
|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|
| TEMPERATURE | The degree or intensity of heat present in a substance or object, especially as expressed according to a comparative scale and shown by a thermometer or perceived by touch. It varies depending on altitude and latitude. Living beings cannot tolerate temperature neither under -2°C nor 45°C. | TEMPERATURA |
| WATER SHORTAGE | A situation in which there is not enough water. | ESCASEZ DE AGUA |
| IDIOMS | | |
| AS RIGHT AS RAIN/ | In excellent health or condition. | FRESCO-A COMO UNA ROSA |
| COME RAIN OR SHINE | Whatever happens. | LLUEVA O HAGA SOL |
| EVERY CLOUD HAS A SILVER LINING | Every difficult or unpleasant situation has some advantage. | NO HAY MAL QUE POR BIEN NO VENGA |
| IT'S RAINING CATS AND DOGS | It is raining heavily. | ESTÁ LLOVIENDO A CÁNTAROS |
| STORM IN A TEACUP | A lot of unnecessary anger and worry about a matter that is not important . | HACER UNA MONTAÑA DE UN GRANO DE ARENA. |
| THE CALM BEFORE THE STORM | The unnatural stillness experienced before a storm breaks, and can be used to describe a period of calm before a crisis. | LA CALMA QUE PRECEDE A LA TORMENTA |

3.2 ROC True stories:

Students in Spain imagined they were journalists and wrote articles based on true stories that have already happened:



THE AVALANCHE

Thomas is an old man who lives at the foot of a mountain in the Pyrenees. The Pyrenees are a mountain range that separates the Iberian Peninsula from France. He lives on the Spanish side.

He loved living undisturbed in his little wooden hut. He woke up every morning to the same incredible view: whiter and whiter. He had his orchard, his cattle and his dog, Nilo. Thomas has lived there for 34 years, building everything himself!

His granddaughters, Sonya and Sara, loved to visit him because of the amazing views. They loved hiking in the white mountains and drinking hot chocolate in front of the fireplace every afternoon. They also loved it when it snowed. The only problem was that it was too cold for them. It wasn't a problem for Thomas, who never minded temperatures below 0°C. Sometimes it was too cold for the crops to grow, so he had to go into town to get food.

But one day he didn't have to. As the years went by, the summers became suffocatingly hot and the winter temperatures rose by more than 10°C, but he was still happy.

On that terrible morning of the 25th of January, when he went to pick up his granddaughters to spend the day with them at the cottage. He couldn't believe his eyes when he came back. Some of the snow had slid down from the mountains, creating an avalanche that swept away everything he had built, including some of his cattle. The three of them burst into tears.

'How - how did this happen?' Sonya said, almost unable to speak.

'Maybe there was a small earthquake or something and the snow slid down from the mountains,' Sara replied.

No, Sara, it was... because of climate change,' Thomas said.

As the two girls looked at him in confusion, he went on. In the last 7 years the temperatures have risen too much for the snow to stay," he said, "I knew something was wrong because it wasn't snowing down here, but I... I never imagined this would happen. He tried to smile as his dog appeared beside him.

This is what we're doing to our planet, and the worst part is that most people don't even want to change it.

I can't imagine what could happen next because of climate change, Sonya said.

Do you think that Sonya and I are also to blame for the destruction of the planet, Grandpa? Sara said, really worried. 'No girls, don't blame yourselves because you're doing perfectly fine. You always recycle, walk everywhere, have showers instead of taking baths... If everyone did the same as you, the Earth would be the paradise it was destined to be'.

'Really?' They said at the same time.

'Of course!' He said, trying to cheer them up, "Now, c'mon, we have to build a new cabin"

By Catalina Maestre Macías and Arantxa del Mar Serrano Dominguez, 4ºESO.

IES Eladio Cabañero, Tomelloso (Spain)



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HEAT WAVES

Heat waves are extreme weather phenomena which are very common in my country, Spain, especially in the central zone, where I live. According to scientists, this happens as a result of climate change as the temperature of our planet has dramatically been increasing in the last century among others things. From my point of view, these happenings are the worst ones because it is very difficult to control or to stop them.

The most serious consequence which is produced by heat waves is health problems in people. Last year some died in our country because of sunstrokes and burns produced by high temperatures during a heat wave. Furthermore, this phenomenon can make some diseases like asthma or Parkinson worse.

Another consequence, referring to animals, is that lots of them are moving from their natural environments due to the heat. For example, since glaciers are melting, polar bears cannot feed on well and they could become extinct in less than a hundred years.

In conclusion, I strongly believe that we should be aware of this problem and that we must find solutions to stop it before it is too late.



2022-1-RO01-KA220-SCH-000085133



DEVASTATING FIRE IN ZAMORA

On 24 June 2022, one of the largest fires ever seen in Spain broke out in Zamora, Castilla y León. This led to the burning of 50,000 hectares and the death of a great deal of flora and fauna.

In the summer of 2022, the situation changed dramatically for the citizens of Zamora when one of the largest fires in Spanish history broke out. Many surrounding villages were affected and at least 1,000 families were left homeless. Houses, streets, buildings... were reduced to ashes. Fortunately, there were no human casualties, but the consequences of this fire will affect people in the future, as the atmosphere was polluted and many fields were burned, resulting in reduced harvests and economic problems, as the government will have to pay a generous sum of money to rebuild the affected areas. In addition, many animals have died in the fires, while others have lost their habitat and food.

Experts say there is no doubt that this fire was one of the consequences of climate change. It causes an increase in temperature, which leads to water stress, that is, an enormous lack of rainfall, resulting in very dry and flammable climates. The flora in these areas burns easily, causing huge fires, such as the one in Zamora last summer.

It's true that the climate in inland Spain has always been extreme, with very hot summers and very cold winters. In recent years, however, these extreme temperatures have increased considerably. Last summer we had up to 45 degrees in the summer and -10 degrees in the winter! We have to stop climate change!

"Climate change is a fact that is happening today, and if we do not find solutions now, we will suffer the consequences in the future," claim some biologists.

For this reason, some experts are trying to control the climate change, reducing the production of factories, promoting public transport to reduce the gas emissions, replacing non-renewable energy resources with renewable ones... However, one of the best measures to stop climate change is social awareness of this factor and its current and future consequences.



Raquel Marquina-1º Bach. IES Eladio Cabañero



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2022-1-RO01-KA220-SCH-000085133



Tragic Events

I'm a girl who lives in Tomelloso, a small town in Spain whose inhabitants mainly work in the fields, and I'm going to tell you the story of the last few harvests.

It all began with the heat wave caused by climate change that hit our country last year, during the incredible period of forty-one days. This extraordinary event made the summer of 2022 the hottest in more than a hundred years.

When I was younger, an old man moved into the house next to mine, and we have become friends, we usually talk several times a day. He is so kind. This neighbour had a piece of land with vines he used to harvest every October. The grapes should have ripened between August and September, but the high temperatures caused the harvest to ripen early. He had to invest more money than he had thought. To make matters worse, ten per cent of the grapes were damaged and the price went up.

In the end, my neighbour had to sell his land because he couldn't make up for the damage. This was the situation of many farmers in my town and in Castilla-La Mancha in general. In fact, throughout the region, grape production was thirty per cent lower than in 2021.

The extreme temperatures have also affected many people and animals. Last summer, people suffered heatstroke and fainted, and many animals died.

For these and other similar situations, we need to be aware that climate change affects everyone and we need to do something to stop it. It's an EMERGENCY!

By Melania Benito Donoso and Marta Boronat Redondo 4º ESO

(IES Eladio Cabañero)



Co-funded by
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2022-1-RO01-KA220-SCH-000085133

THE UNTENABLE SITUATION IN MURCIA

Monday 26 September 2022. The message from my uncle came just as my mum and I were watching the catastrophic news on TV. Anyone could understand the gravity of the situation just by reading the headlines:

‘Floods and destruction during the most intense rainfall in the history of the Region of Murcia’.

Climate change and extreme weather conditions are definitely changing the lives of many people, as some strange natural disasters have occurred in places where they could not have been imagined. That is the case of Murcia. Last night saw the heaviest rainfall ever recorded in this autonomous community, with 40 litres of rain falling in just 10 minutes.

In addition, the melting of the poles has caused the sea level to rise, completely flooding several regions. Initially, the floods affected only a few places in Mar Menor and Cartagena, where 150 incidents were recorded. Unfortunately, this morning the floods reached the interior of Murcia, where the number of incidents has risen to 440. 112 and all kinds of authorities are trying to deal with the problem, but it is a very difficult task at the moment.

In addition, the melting of the poles has caused the sea level to rise, completely flooding several regions. Initially, the floods affected only a few places in Mar Menor and Cartagena, where 150 incidents were recorded. Unfortunately, this morning the floods reached the interior of Murcia, where the number of incidents has risen to 440. 112 and all kinds of authorities are trying to deal with the problem, but it is a very difficult task at the moment.

These two disasters, heavy rains and huge floods, are destroying both natural and urban landscapes and making it impossible to travel around the region. Today, many neighbours have woken up to find that the whole street and the lower part of their houses are full of water mixed with mud. Trees have been uprooted and cut in half, many bridges have collapsed and many of their friends are stuck in their cars waiting for help to arrive.

At the moment, however, the region is on yellow alert, as the authorities believe that the situation will not get any more serious than it already is and hope that the situation will be under control within a few days.

Unfortunately, not all the damage has been material. This huge disaster has taken an innocent life. My uncle's message said: 'Your aunt died this morning due to an aggressive water leak in the cellar.'

As I see it, we really do not take climate change and extreme weather seriously until it affects us directly, as it has happened to me. We must assume that climate change, and all its consequences, such as the greenhouse effect, is a real issue that we must focus on and prevent it in any way we can. Governments must be concerned and all the citizens must take part in tasks such as recycling and putting away each piece of garbage in the right bin.

The time for the apocalypse is running very fast and by the time we realise it, it may be too late for us.

Alejandro Guerra de Hevia- 1º Bachillerato- IES Eladio Cabañero

3.3 ROC Charts- calculation of our carbon footprint.

Following their calculation, Spanish students identified what they should do to neutralize their emissions/ carbon footprint:



2022-1-RO01-KA220-SCH-000085133



Why calculate the ecological/carbon footprint?

Figuring out the size of our ecological footprint will help us to know that we are responsible for our planet moving towards sustainability or towards disaster. It will allow us to discover what we can do in our daily lives to create a more sustainable society... and why we should do it.

How to calculate your ecological/ carbon footprint?

In order to calculate our ecological/carbon footprint, we will use this online calculator:

<http://www.tuhuellaecologica.org/>

You will have to collect a series of personal data and fill in these charts regarding your household energy consumption, water consumption, transport costs and the amount of waste you generate.

| Heating | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | Sunday |
|-----------------------------------------------------------------|--------|---------|-----------|----------|--------|----------|--------|
| How many hours do you have the heating on per day? | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| How many radiators do you turn on per day? | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| If you have hot/cold air, how many hours do you use it per day? | | | | | | | |

| Lighting | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | Sunday |
|---------------------------------------------------|--------|---------|-----------|----------|--------|----------|--------|
| How many hours do you have the lights on per day? | 5 | 5 | 5 | 5 | 5 | 6 | 6 |
| How many radiators do you turn on per day? | 7 | 7 | 7 | 7 | 7 | 7 | 7 |

| Household | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | Sunday |
|-----------|--------|---------|-----------|----------|--------|----------|--------|
|-----------|--------|---------|-----------|----------|--------|----------|--------|

| | | | | | | | |
|--------------------------------------------------------------------------|----------|----------|----------|----------|----------|----------|----------|
| appliances | y | y | y | y | y | y | y |
| How many hours a day is the TV on? | 3 | 3 | 3 | 4 | 3 | 5 | 5 |
| How many hours a day do you use the computer? | 2 | 2 | 0 | 0 | 0 | 0 | 0 |
| How many hours a day do you charge your mobile phone or tablet? | 2 | 0 | 0 | 2 | | | 2 |
| How many times do you cook in the house per day? | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| How many cookers do you turn on per day? | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| How often do you use the oven? | | | | | | | 1 |
| How often do you use the dishwasher? | | | | | | | |
| How often do you use the washing machine? | 1 | | | | | 1 | |
| Do you use any other appliances on a regular basis? _____no_ _____ | | | | | | | |

SPAIN

| Water Consumption | Monday | Tuesday | Wednesda y | Thursda y | Friday | Saturda y | Sunday |
|-----------------------------------|---------------|----------------|-----------------------|----------------------|---------------|----------------------|---------------|
| How many times a day do you flush | 8 | 9 | 8 | 8 | 9 | 8 | 9 |

| | | | | | | | |
|-----------------------------------------------------------------------------|---------------|----------------|-----------------------|----------------------|---------------|----------------------|---------------|
| the toilet? | | | | | | | |
| How many minutes do you spend in the shower? | 20 | 8 | 15 | 8 | 20 | 8 | 8 |
| Indicate the number of times you take a bath in the bathtub. | | | | | | | |
| How many times do you brush your teeth a day? | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| How many times do you wash your hands or face daily? | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| Dishwasher. I use short cycle washes. | | | | | | | |
| Dishwasher. I use long cycle washes. | | | | | | | |
| I wash the dishes by hand and leave the tap running throughout the process. | yes | | | | | | |
| Washing machine. I use short cycle washes. | yes | | | | | | |
| Washing machine. I use long cycle washes. | no | | | | | | |
| Hot Water | Monday | Tuesday | Wednesda y | Thursda y | Friday | Saturda y | Sunday |
| How many times do you use the shower and how long does it take? | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Number of times you use hot water | 4 | 4 | 4 | 4 | 4 | 6 | 6 |

| | | | | | | | |
|----------------------------------------------------------------------|--|--|--|--|--|--|--|
| when you wash the dishes, use the washing machine or the dishwasher. | | | | | | | |
|----------------------------------------------------------------------|--|--|--|--|--|--|--|

| Transport | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|----------------------------------------------------------------------------------------|--------|---------|-----------|----------|--------|----------|
| Journeys by car | 2 | 4 | 4 | 2 | 2 | 4 |
| If you use the car to go shopping, how often do you go shopping for basic necessities? | 1 | | | | 1 | |
| Number of short-distance trips, outside your town. | 2 | 4 | 4 | 2 | 2 | 4 |
| Number of long-distance trips, outside your country | | | | | | |

| Waste and Materials | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|-------------------------------------------------------------------------|--------|---------|-----------|----------|--------|----------|
| How often are leaflets, magazines or newspapers delivered to your home? | 0 | 0 | 0 | 0 | 0 | 0 |
| How much packaged food do you consume? | 2 | 2 | 1 | 1 | 1 | 0 |
| How many bags of organic waste do you put in the bin? | 1 | | 1 | | 1 | |
| How much glass do you put in the bin? | 7% | | | | | |
| How much paper/ cardboard do you | 2% | | | | | |

| | | | | | | |
|---------------------------------------------------|--|--|--|--|--|--|
| put in the bin? | | | | | | |
| Do you recycle other types of waste? _____yes_ | | | | | | |

Results

My global ecological footprint for electricity is 1929 kep and for employees 482 kep.
 And my total cost is 1823.12 euros.
 My water consumption per year is 13835, 231% and 298 Hm3.
 Regarding transport, my expenditure is 948 kep, 30050km, 0.75, 3 kep.
 My residual organic waste is 56%, paper/cardboard 5%, glass 7%, plastic 17%, metals 2%, bricks 3% and other waste 10%.

How can you reduce your carbon footprint?

From my point of view my ecological footprint is very high and I would like to reduce it. Not only would it depend on me but also my parents have to be aware, which is more difficult.

But from my reach I could reduce it by taking these measures:

- Take the car as little as possible and make journeys on foot even if they are a bit too long.
- Reduce the use of lights that are not needed at that time.
- Do not leave the TV on when no one is watching.
- Reduce minutes under the shower.
- Start recycling.
- Make my parents aware that caring for the environment is important.
- Reduce the purchase of packaged food.



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Why calculate the ecological/carbon footprint?

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In order to calculate our ecological/carbon footprint, we will use this online calculator:
<http://www.tuhuellaecologica.org/>

You will have to collect a series of personal data and fill in these charts regarding your household energy consumption, water consumption, transport costs and the amount of waste you generate.

| Heating | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | Sunday |
|-----------------------------------------------------------------|--------------------------------------|--------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------------------|--------------------------------------|
| How many hours do you have the heating on per day? | When someone take a shower(2 hours) | When someone take a shower(2 hours) | When someone take a shower(2 hours) | When someone take a shower(2 hours) | When someone take a shower(2 hours) | When someone take a shower(2 hours) | When someone take a shower(2 hours) |
| How many radiators do you turn on per day? | Approximately 4 times per day | Approximately 4 times per day | Approximately 4 times per day | Approximately 4 times per day | Approximately 4 times per day | Approximately 4 times per day | Approximately 4 times per day |
| If you have hot/cold air, how many hours do you use it per day? | Only 1 or 2 hours | Only 1 or 2 hours | Only 1 or 2 hours | Only 1 or 2 hours | Only 1 or 2 hours | Only 1 or 2 hours | Only 1 or 2 hours |

| Lighting | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | Sunday |
|---------------------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| How many hours do you have the lights on per day? | Usually 4 hours | Usually 4 hours | Usually 4 hours | Usually 4 hours | Usually 4 hours | Usually 4 hours | Usually 4 hours |

| | | | | | | | |
|-----------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| How many lights do you turn on per day? | 3 or 4 lights | 3 or 4 lights | 3 or 4 lights | 3 or 4 lights | 3 or 4 lights | 3 or 4 lights | 3 or 4 lights |
|-----------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|

| Household appliances | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | Sunday |
|-----------------------------------------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| How many hours a day is the TV on? | Only 1 hour | Only 1 hour | Only 1 hour | Only 1 hour | Only 1 hour | Only 1 hour | Only 1 hour |
| How many hours a day do you use the computer? | I spend 2 hours at computer | I spend 2 hours at computer | I spend 2 hours at computer | I spend 2 hours at computer | I spend 2 hours at computer | I spend 2 hours at computer | I spend 2 hours at computer |
| How many hours a day do you charge your mobile phone or tablet? | At night | Anytime | At night | Anytime | At night | Anytime | At night |
| How many times do you cook in the house per day? | I don't cook | I don't cook | I don't cook | I don't cook | I don't cook | I don't cook | I don't cook |
| How many cookers do you turn on per day? | I don't cook | I don't cook | I don't cook | I don't cook | I don't cook | I don't cook | I don't cook |
| How often do you use the oven? | 2 times | 2 times | 2 times | 2 times | 2 times | 2 times | 2 times |
| How often do you use the dishwasher? | We don't use it | We don't use it | We don't use it | We don't use it | We don't use it | We don't use it | We don't use it |
| How often do you use the washing machine? | 2 times per week | 2 times per week | 2 times per week | 2 times per week | 2 times per week | 2 times per week | 2 times per week |
| Do you use any other appliances on a regular basis? | The microwave and the fryer | The microwave and the fryer | The microwave and the fryer | The microwave and the fryer | The microwave and the fryer | The microwave and the fryer | The microwave and the fryer |

| | | | | | | | |
|--|--|--|--|--|--|--|--|
| | | | | | | | |
|--|--|--|--|--|--|--|--|

| Water Consumption | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | Sunday |
|-----------------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| How many times a day do you flush the toilet? | 7 times | 7 times | 7 times | 7 times | 7 times | 7 times | 7 times |
| How many minutes do you spend in the shower? | 5 minutes | 5 minutes | 5 minutes | 5 minutes | 5 minutes | 5 minutes | 5 minutes |
| Indicate the number of times you take a bath in the bathtub. | I don't have | I don't have | I don't have | I don't have | I don't have | I don't have | I don't have |
| How many times do you brush your teeth a day? | 2 times | 2 times | 2 times | 2 times | 2 times | 2 times | 2 times |
| How many times do you wash your hands or face daily? | 8 times | 8 times | 8 times | 8 times | 8 times | 8 times | 8 times |
| Dishwasher. I use short cycle washes. | Yes | yes | yes | yes | yes | yes | yes |
| Dishwasher. I use long cycle washes. | no | no | no | no | no | no | no |
| I wash the dishes by hand and leave the tap running throughout the process. | Yes | yes | yes | yes | yes | yes | yes |
| Washing machine. I use short cycle washes. | yes | yes | yes | yes | yes | yes | yes |
| Washing machine. I use long cycle washes. | no | no | no | no | no | no | no |
| Hot Water | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | Sunday |
| How many | 1 time | 1 time | 1 time per | 1 time | 1 time | 1 time | 1 time |

| | | | | | | | |
|--------------------------------------------------------------------------------------------------------|--------------------|--------------------|----------------|--------------------|--------------------|--------------------|--------------------|
| times do you use the shower and how long does it take? | per day. 5 minutes | per day. 5 minutes | day. 5 minutes | per day. 5 minutes | per day. 5 minutes | per day. 5 minutes | per day. 5 minutes |
| Number of times you use hot water when you wash the dishes, use the washing machine or the dishwasher. | 1 time | 1 time | 1 time | 1 time | 1 time | 1 time | 1 time |

| Transport | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | Sunday |
|-----------------------------------------------------------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Journeys by car | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| If you use the car to go shopping, how often do you go shopping for basic necessities ? | I don't use car | I don't use car | I don't use car | I don't use car | I don't use car | I don't use car | I don't use car |
| Number of short-distance trips, outside your town. | 0 | 00 | 00 | 0 | 0 | 0 | 0 |
| Number of long-distance trips, outside your country | 0 | 00 | 0 | 0 | 0 | 00 | 0 |

| Waste and Materials | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|-------------------------------------------------|--------|---------|-----------|----------|--------|----------|
| How often are leaflets, magazines or newspapers | never | never | never | never | never | never |

| | | | | | | |
|-------------------------------------------------------|----------------------|----------|----------|----------|----------|----------|
| delivered to your home? | | | | | | |
| How much packaged food do you consume? | someones | someones | someones | someones | someones | someones |
| How many bags of organic waste do you put in the bin? | 1 | 1 | 1 | 1 | 1 | 1 |
| How much glass do you put in the bin? | 0 | 0 | 1 | 0 | 0 | 1 |
| How much paper/ cardboard do you put in the bin? | 1 | 0 | 0 | 1 | 0 | 1 |
| Do you recycle other types of waste? _____ | Yes, plastic and Oil | | | | | |

| Results |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Journeys: 113 kep / Distance: 4073 km / Round the world: 0.08 / fuel: 4 kep / Waste per day: 1 kg / Difference to average person: 109.6 percent Natural gas: 720 € / Electricity: 220 € / litres per year 68246 L Difference with average consumption (L): +8246 L (114 percent) |

How can you reduce your carbon footprint?

3.4 ROC Green Corner

Green Corner of Climate change at the Spanish school, in each classroom, containing R advice: RETHINK choices, REFUSE single use, REDUCE consumption, REUSE everything, REPAIR, REPURPOSE, RECYCLE- students in each class organised it:

The R Corner

- 1. Repair things so that they can be used again.*
- 2. Recycle all your waste.*
- 3. Rediscover the possibilities you have to help the environment.*
- 4. Read some articles that can help you protect the environment.*
- 5. Rethink your purchases and make sure that all items are necessary.*
- 6. Reintroduce an environmentally healthy lifestyle into your life, such as NO littering.*
- 7. Rearrange your bedroom, kitchen or living room. I'm sure you'll find plenty of plastic that can be Reused or Recycled.*
- 8. Retweet news, such as environmental events, and post them to reach as many people as possible.*

Francisco Manuel Serrano Soriano 4º FSC



Let's Protect The Environment!

-WITH Rs-

RECYCLE

**REPAIR YOUR STUFF
BEFORE BUYING
MORE**

**REUSE ALL TYPES OF
ITEMS**

**REFUSE BATHS,
SHOWER INSTEAD!**

**RECOMMEND YOUR
FRIENDS THINGS
THEY CAN DO TO BE
MORE ECO-FRIENDLY**

**RETHINK YOUR
CHOICES**

**REDUCE ENERGY
USAGE**

**REDESIGN THINGS TO
MAKE THEM LAST**

**REUSABLE BAGS ARE
COOLER!**

**REPLACE YOUR
LIGHTBULBS WITH
LED-LIGHTS**

**RUNAWAY FROM
CONSUMERISM**

SPAIN



Co-funded by the
Erasmus+ Programme
of the European Union



MY R'S

1. RECYCLING
2. REFORESTATION
3. REDUCTION
4. RENEWABLE
ENERGIES
5. REDUCE WASTE
6. RESPONSIBILITY
7. REUSE
8. REHABILITATION
9. RESPECT
10. REGENERATION
11. RESTORATION
12. RECOVERY

ARTURO CORREAS
MORENO 2ºA

MYR'S

Reduce plastic. For example, take your own bags to the supermarket

Reuse plastic bottles in different creative ways. For example in pots for new plants

Recycle the trash. For example, put each type of waste in a different bin.

Reuse. For example, do not buy or avoid single-use plastic as much as possible.

Reduce. For example, go to school by bus, bike or walk

Reuse. For example, use paper on both sides

Recycle. For example, use leftovers to fertilise your plants

Repurpose. For example, reuse an old object by decorating it and giving it a new use

Reduce water consumption. For example, when you brush your teeth, turn off the tap to use less water.

Reuse. For example, make your own wrapping paper

My R's



Reuse old things

Recycle the trash

Reduce plastics

Repurpose the things that you don't use

Redesign things, make them trendy and useful

Remake things with other things.

Reformulate things to make them more eco-friendly

Revalue things, personalize and use them as presents

Repair the broken things

Refuse single-use items

Rethink before you buy

Repair old things and give them a new life

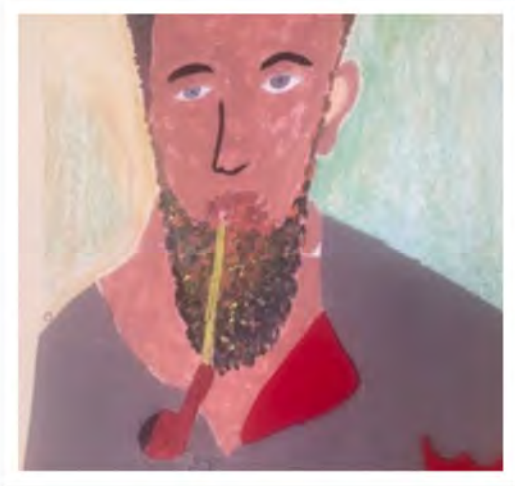
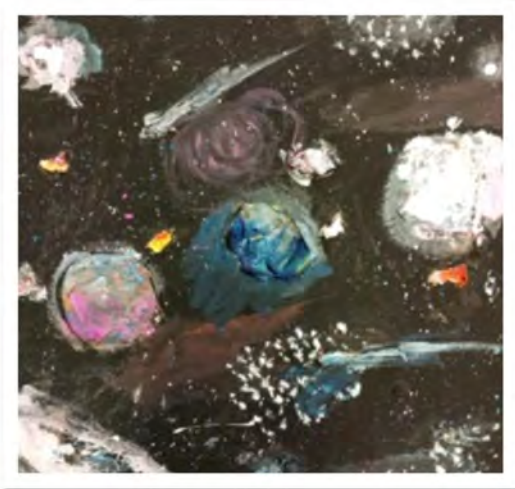
Jimena Iniesta Moreno
2º ESO

SPAIN

3.5 ROC "Plastic Fantastic" Paintings

ROC "Plastic Fantastic" Paintings- done with recycled plastic, as material- Spanish students painted using recycled plastic, according to the idea of Mbongeni Buthelezi, an artist in South Africa, who has found a way to combine his artistic passion and his love of recycling.

Mbongeni Buthelezi collects plastic bags from the streets around his Johannesburg studio and melts them to create a unique kind of art - he calls it "plastic fantastic": "The Universe", "Rubbish Island", "My Dad", "Virgin Mary", "Planets", "Starry Night".



3.6 ROC Water Stories

Spanish students mitigated on clean water in the world, on efficient ways to stop wasting water. They wrote Water Stories, based on true facts:



A CATASTROPHIC FLOOD

In 1997, probably as a result of climate change, there was a disastrous flood in Tomelloso. It was the month of August and it was raining heavily.

It is not usual for Tomelloso to have such heavy rain. It only rained for one day, but the rain was so heavy that the sewers couldn't do their job and the water began to flow into the basements of the houses.

People tried to get rid of the water, but they couldn't, so all the basements were flooded.

Many people lost everything that was stored in their basements.

This was the case with my aunt, all her belongings were destroyed or useless. She tried to save her things, but it was so dangerous that she could only save one or two boxes. She called many relatives and friends, but they were all in the same situation, trying to save what they could.

The day after the disaster a new problem arose: the water had to be removed from the basement. A tractor with a water pump went to my aunt's house and it took about three to five hours to get rid of all the water.

But not all the water was drained, so they had to clean the whole basement and throw away all the things that were there, which were now useless.

The situation was chaotic, traffic was stopped, the town's festivals were cancelled and all the rides at the fair were closed.

Francisco José Jareño 1º Bachillerato.
IES Eladio Cabañero



STORM FILOMENA



In January 2021, Spain was hit by the worst storm in 50 years. It was called Filomena.

It left most of the country on red alert, with winds of up to 130 km/h and huge amounts of snow and rain.

In the centre of the peninsula, a place with a Mediterranean climate where it doesn't usually snow, most regions were covered with snow, reaching 60 cm or more in some areas.

There were long power cuts and some evenings we had to light a candle, there was no hot water or heating. If we wanted to keep warm, we sometimes had to get into the car and turn the heating on.

For three days we didn't have any food, and one day my family and I slept on top of the car.

The roads were cut and if you wanted to buy food you had to walk long distances. Something so simple became a risk.

During the storm Filomena, the days were cold and we were all in the house, wearing layers of clothes and blankets.

It was a nightmare, and if we don't want that to happen again, we should take care of our planet.





Co-funded by
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THE FLOOD THAT CHANGED MY LIFE

Today I've stopped for a while to remember what I lived five years ago. I still feel the fear, sadness and helplessness of reliving those hours when everything I had was completely destroyed. I am Martina, a sixteen-year-old girl who lived in Mallorca, one of the Balearic Islands of Spain, in the Mediterranean Sea, known for its beach resorts, for its coves, for its spectacular limestone mountain range, for its beautiful fishing villages and for its unique rural landscape of typical crops.

It was the ninth of October 2018 and everything seemed normal... my parents were working, my little brother was at a friend's house and I was at home studying, with my dog "Captain", a faithful companion and great friend to whom I owe my life.

Suddenly the sky became dark with big black clouds and it started to rain... I remember that the sound of the water against the windows became louder, faster, more intense... without stopping! And there was no going back... The rain was falling in an unusual way, and the water started running all over the street, all over the city, rising, sweeping everything in its path...

Then I realised what was happening: the stream that ran through the town had overflowed and caused a huge flood! The houses were destroyed, the buildings fell down, the cars were dragged down the street by the water, crashing into each other and taking everything with them; the trees fell, crushing everything under them, and then I tried to leave the house, but I could not open the door!

A branch of a tree was stuck in such a way that I could not move it because of its size, and it did not allow me to escape in any way. And then Captain came out of one of the broken windows and started barking and barking, luckily two firemen noticed and came to get me! Hours later I was able to rejoin my parents and brother and begin to recover from the catastrophe we had experienced.

Finally, I needed an explanation as to why all this was happening, so I started reading: After the research carried out by students, professors and researchers, it was concluded that the amount of rainfall was not "normal", so that because it rained a lot in a very short time, the ground did not have time to drain the water and this circumstance, together with the characteristics of the terrain, caused the torrent to overflow, causing deaths and material damage of great importance.

From all this I learned that there are things that cannot be controlled and that thanks to teamwork and the help of everyone in general, especially people with purchasing power and the government, you can get ahead and that is why I made the most important decision, which would be to dedicate my life to the research and study of these natural phenomena to find possible solutions or at least to prevent them so that no one else has to experience these disasters.

Julia Nasif 1º Bachillerato-IES Eladio Cabañero



022-1-RO01-KA220-SCH-000085133



THE LAGOON

Karen loved her village, Ruidera. Everyone knew each other and there was always a good atmosphere. Every morning Karen went to her favourite lagoon: La Redondilla. She would get up early to watch the incredible spectacle of the sun rising and reflecting in the water, leaving a whole palette of colours in the clouds. Stunned, she would watch in silence. When it was over, she went back to Ruidera to go to school. The next day, at 5 a.m., she went back to the lagoon.

She followed this routine for more than two years, until one day the lagoon was gone, the sun she admired so much had drunk the water. She couldn't believe her eyes and began to cry. Desperate, she turned to her mother, "Mum..." she couldn't speak. Her mother, who already knew what had happened, hugged Karen. "Mum, the lagoon is gone," Karen said in her arms, "there's absolutely nothing there, not even a drop of water," she couldn't help but break down in tears again.

Her mother kissed her forehead, "I know, dear, I know. It's because the climate is changing. It's too hot and the sun's rays are dangerous," she said, "the ozone layer is weakening and can't protect us.

Karen pulled away from her mother's arms and stared at her goggle-eyed. "Is it... is it the end of the world?" she asked.

Her mother laughed, but it was a sad laugh. 'No, dear, but we're not very far from it if we continue to treat our planet like this'.

The girl kept staring at her and asked, 'What can we do?'

'Many things, Karen. Walk instead of drive, recycle, don't waste, don't use too much plastic... And lots more. Little things that aren't a big deal to us are a big help to the planet'.

Karen nodded, "I will. I will help save the planet.

Her mother smiled proudly and gave Karen a hug. I wish everyone would do what her daughter did. We have to help Karen save the planet.

By Catalina Maestre Macías and Arantxa del Mar Serrano Domínguez, 4ºESO.

IES Eladio Cabañero, Tomelloso (Spain)



2022-1-RO01-KA220-SCH-000085133



Our holidays with seaweed

Our names are Marta and Melania and last year we spent our summer holidays in Cadiz, in a town near the beach of Azahara de los Atunes. We stayed in a small rented house and the first day, in the afternoon, we decided to go to the beach. We walked to the beach and when we got there, we put on our swimming costumes.

Unfortunately, once we were in the water, we noticed that there was more and bigger seaweed than in previous years. However, as we wanted to spend more time in the sea, we stayed for an hour. After this time, we decided to return to the rented house. A few minutes later, we started to feel itchy and jumped into the car to go to the nearest hospital.

The doctor there told us that the problem was an allergic reaction to the seaweed and gave us a special cream.

As we left the doctor's office, an old but happy woman asked us what had happened and if we were all right. We told her the whole story and she wished us good health. She also explained that that year (2021) there had been an abnormal amount of seaweed on the beaches, which had scared away all the tourists.

We said goodbye to the kind old woman and left the hospital.

Later we searched for some information about the problem on the internet and we discovered that this phenomenon was caused by the chemicals that produce acid rain, no natural fertilizers or other waste. Algae have plenty of food and they grow in excess.

Finally, we spent our summer holidays doing other things that did not include swimming in the sea.

In conclusion, because of this major problem, people can't swim in the sea and seaweed causes allergic reactions. Furthermore, the small towns where the people live are losing a lot of money to the tourists.

This is a perfect example of why we need to take action to protect the environment. Because it affects every aspect of our lives.

By Melania Benito Donoso and Marta Boronat Redondo 4º B (IES Eladio Cabañero)



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2022-1-RO01-KA220-SCH-000085133



FLOODS IN TOMELLOSO

On 5th April 2021, a very strange event, probably related to climate change, happened. It started with heavy rain at about 3pm, when we were all eating. In my case, I was having a pizza while we were listening to the sound of heavy rain through the windows, as is usually the case, so we didn't pay any attention.

But suddenly we got a call from my uncle, water was leaking under his garage door and it was getting flooded

We hadn't even noticed, it had been raining for an hour and the whole town was flooded, so my dad ran to my uncle's house to help him drain the water out of the house. But it wasn't just his house that was flooded, it was also my friend's. He lives in a residential area and all the neighbours had to come out of their houses to help each other. It took them over two hours to get the water out of the house and a lot of furniture was damaged. My uncle's sofa was damaged and he had to buy a new one because it was completely destroyed.

In the last three years, these events have become more and more frequent and it is obvious that most of them are caused by global warming.

We now have more extreme weather. We have some droughts that last over two months and all the rain that should fall in one year comes in just a few days.

Gonzalo Puig

1º Bach.C

IES Eladio Cabañero

3.7 ROC Vlogs / Public Speech Competitions

ROC Vlogs / Public Speech Competitions, on topics related to climate change, achieved by Spanish students, who imagined they were delivering their speech for TED Talks:

<https://youtu.be/nR5xedLK21I?si=QHOh6-uhZ5s59CM3>

https://youtu.be/ItRiGByHBSt?si=lzzwl-_4u8gZozcw

<https://youtu.be/VmvmF1OAKOc>

https://youtu.be/R1Dmwo_fnnM

<https://youtu.be/N4LJf1vEA2A>

3.8 ROC "Actors explore climate change"

"Actors explore climate change" workshop-students wrote scripts, directed and acted in plays on climate change



2022-1-RO01-KA220-SCH-000085133



**RANGERS OF THE
GREEN**



Title: RANGERS OF THE GREEN

Characters:

- 2 Scout Leaders- One of them is a native person to the Amazon Rainforest.
- 8 Young Scouts.

Place: Somewhere in the Amazon Rainforest.

Scout Leader 1 (Marino): Welcome, young scouts, to the heart of the Amazon Rainforest! My name is Amaité and this is Maya. We are your Scout Leaders. We will guide you through our journey of exploration during the fifteen days you're going to spend here.

SCOUT 1 (Mara López Canales)

Wow!!!! This place is amazing, the trees are so tall..... but, how can we protect it?

Scout Leader 1 (Marino): Ah, an excellent question! The Rainforest is an ecosystem full of life. To protect it, we must first understand it.

SCOUT 2 (María Olmedo Moreno)

How can we understand it better? Are we safe in the Rainforest?

Scout Leader 1 (Marino): we can understand it better by learning about the natural balance within it. We must respect the plants, animals, and the indigenous people who live here.

Scout leader 2 (Irene): regarding your second question, you need knowledge and preparation. You must learn to walk through dense vegetation, learn about the plants you can eat, and find sources of clean water.

Young Scout 3 (Marta): How can we get it?

Scout Leader 1 (Marino): With training and respect for the environment. Remember, we are not here to conquer the rainforest but to learn to live with it.

SCOUT 3 (Marta): How can we reduce our impact on the environment while we're here?

Scout Leader 1 (Marino): I've already told you: by respecting the rainforest. This means reducing our waste, avoiding damage to plants and trees, and leaving the environment as we found it.

SCOUT 4 (Marcos Pomares) It's time to do some exploring! It'll be fun! There is a wealth of wild flora and fauna in this wonderful ecosystem, and we have to walk all over the rainforest, paying attention to every detail. Our main goal is to discover a wide range of living creatures!

Scout Leader 1 (Marino): And you will, by becoming real rangers of the Amazon Rainforest. Together, we can make a difference

SCOUT 5 (Andrés Rodríguez Castellanos) Can you tell us more about the plants and animals of this place? I've seen many documentaries about it.

Scout Leader 1 (Marino): Of course! The rainforest is home to a large number of species and all of them are essential.

Young Scout 5 (Andrés): What about the people who live here?

Scout leader 2 (Irene) Well, we're not many, our lifestyle is very simple, we don't need many things. The rainforest provides us with everything we need. We're a bit scared of curious foreigners. Most of them don't understand what it means to live here and they often cause a lot of damage. That's why we have decided to show people around and tell them about us. When they get to know us, they understand our customs and it helps protect the environment.

Scout Leader 1 (Marino): They have a deep understanding of the rainforest. We can learn a lot from their wisdom and traditions.

Young scout 6 (Soraya): How can we help the tribes that are losing their land and have to move to other places because of the destruction of their trees?

Scout Leader 2 (Irene): By respecting our culture, listening to our stories, and helping us fight for our rights. Together we are stronger and it will be easier for us to protect the rainforest.

Young Scout 7 Jimena: We won't get bored! There's so much to learn, and everything is so interesting!

Scout Leader 1 (Marino): You're right, the rainforest is your classroom now. You must be curious and try to remember every bit you learn.

Young Scout 7 (Jimena): What else can we do to help?

Scout Leader 2: When you go back to your countries, cities and towns, you must help raise awareness of the importance of looking after the natural world and talk to your communities about the importance of living sustainably.

Young Scout 8 (Arturo): When do we start exploring the rainforest? I'm looking forward to it.

Scout Leader 1 (Marino): Calm down! We have interesting but long days ahead. The rainforest is amazing but we must also be careful and approach it carefully and respectfully.

All: We need to stop climate change. ***Let's Take action and Make a Change!***

Rangers of the Green by:

Arturo Correas Moreno
Irene María Díaz Medina
Marino Domínguez Lozano
Jimena Iniesta Moreno
Mara López Canales
María Olmedo Moreno
Marcos Pomares Palau

Marta Reguillo Gallego
Andrés Rodríguez Castellanos
Soraya Yáñez Camuñas

Year 2 ESO (Compulsory Secondary Education)

3.9 ROC Articles / PPTs

Articles / PPTs with topics:

"Climate Change in Spain ", "The importance of water ", "WATER -the most vital resource ", " World Water Day"

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- 1 INTRODUCCION
- 2 WATER IN SPAIN
- 3 RENEWABLE ENERGY
- 4 HOW WE CAN CONTRIBUTE?



RENEWABLE ENERGY








SOLAR ENERGY ENERGY WIND GEOTHERMAL ENERGY HIDRAULIC ENERGY OCEAN ENERGY BIOENERGY

WATER IN SPAIN


SPAIN

- 70% of the territory is in danger of desertification
- It rains 25% less than 50 years ago
- Drought has caused irreversible losses in more than 3.5 million hectares of rainfed land
- The lack of water affects 60% of the Spanish countryside
- The reservoirs intended for human consumption and agriculture, are today at 42.4% of their capacity
- In 24 municipalities in the province of Cordoba, their inhabitants do not have drinking water

INTRODUCCION : THE WATER


OUR BEST RESOURCE

- Water is a natural element for all the living beings.
- This natural resource is essential for ecosystems and for climate regulation.
- For this reason and more, we must regulate its proper use.



THANK YOU!

and remember that we can change the world



MARCH 22TH

WORLD WATER DAY




HOW WE CAN CONTRIBUTE?

- Turn off the tap while you are brushing your teeth.
- Reuse the water with which you have cleaned the vegetables for watering the plants.
- Do not buy bottled water if you do not need it. We need 5 litres of water to make a bottle.
- Collect rainwater to irrigate or clean.
- Avoid processed products in your diet, because their preparation requires a large amount of water.
- Take a shower instead of taking a bath.




METHODS TO PREVENT WATER DEPLETION




2. REDUCE PLASTIC CONSUMPTION

- To reduce water pollution, it is essential to reduce the use of single-use plastic and always recycle this material in the appropriate container. Plastic takes time to degrade and remains in the environment for many years, decomposing in the form of microplastics that harm the water and all the life it contains, as well as humans, who sometimes consume this water.

CURRENT WORLD WATER RESERVES



- Indeed, 69.7% of fresh water is frozen at the poles or in glaciers, while 30% is buried under the surface in aquifers and 0.3% is in rivers or lakes and it is not made drinkable, although the last two can be used when needed. Still, only 0.007% of all the water on planet Earth is safely and immediately available for human consumption (stored in reservoirs and so on).



WATER


THE MOST VITAL RESOURCE AND WHAT WE MOST UNDERVALUE

By: Alejandro Guerra De Hevia, 1º of Bachillerato, IES ELADIO CABANERO


THE IMPORTANCE OF WATER TO LIFE

Water is one of the most abundant elements f on planet Earth, whether in liquid, solid or vaporous form, salty or fresh water, anywhere on our planet we find water, in greater or lesser abundance. And luckily it is so, because water is an essential element for life, the element that is most related to the possibility of the development of the different types of life on planet Earth.

Our planet is



70% water



THE IMPORTANCE OF WATER TO LIFE


- Water not only serves as a means of hydration for humans, animals and plants, it also serves to cleanse and maintain good hygiene, provides energy, regulates the climate or hosts life; that is, it fulfills key and essential functions for our planet to remain as it is.



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- The importance of water to life.
- Current world water reserves.
- Human impact on water.
- Consequences
 - Droughts
 - Inequality between developed and developing countries.
- Methods to prevent water depletion:
 - End deforestation
 - Reduce plastic consumption.

CURRENT WORLD WATER RESERVES



- Of the estimated 1,386 million cubic kilometres of water reserves on Earth, 97.5% is salt water. This means that only 2.5% is fresh water (35 million cubic kilometres), but even this percentage does not really represent the water that we can have access to.

CONSEQUENCES




1. WATER EROSION

- Anomalies in bodies of water can generate water erosion and sedimentation in channels and basins. In addition, tourist exploitation and the development of urban complexes in coastal areas also bring high levels of erosion.

CONSEQUENCES

2. INEQUALITY BETWEEN COUNTRIES

- The distribution of the small amount of surface drinking water is totally uneven. On the one hand, water scarcity already affects four out of ten people, a figure that the UN predicts will reach a quarter of the world's population by 2050, who will have to survive in countries with a chronic lack of drinking water. At the same time, a dozen countries accumulate more than half of the world's freshwater reserves: almost a third is found between Brazil and Russia alone.




HUMAN IMPACT ON WATER

- Each year more than 450 cubic kilometres of sewage are dumped into the sea. An additional 6,000 cubic kilometres of fresh water are used to dilute this pollution. Every day, 2 million tons of wastewater flow into the world's waters, according to UN data.



METHODS TO PREVENT WATER DEPLETION



1. END DEFORESTATION

- Forests are one of the main water sinks, both at atmospheric and subsoil level. The greater the forest mass, the more fresh water there will be in the surrounding areas. In addition, trees serve as scrubbers for many pollutants that are released into the environment and help prevent them from reaching the water. Applying this measure could help reduce water pollution to a great extent.

Climate Change in Spain
Patricia and Gonzalo

Index

- 01 Main problems
- 02 Economic consequences
- 03 Environmental consequences
- 04 Solutions
- 05 Conclusion

01 Main Problems

INVESTING IN RENEWABLE ENERGIES TO STOP CLIMATE CHANGE
We want a greener world

REDUCING GREENHOUSE GAS EMISSIONS
We need to protect people

02 Economic consequences

Climate change is causing many problems but if we take action, we can prevent it.

Farming

Agriculture

A WILDFIRES
Increase in the frequency and intensity. Damages to homes and property

B COASTAL AREAS
Erosion of coastal areas

C SEA LEVELS
Rising of sea levels

D STORM ACTIVITY
Increase of storm activity

E BIODIVERSITY
Difficulty of species to adapt to changes in temperature and rainfall patterns

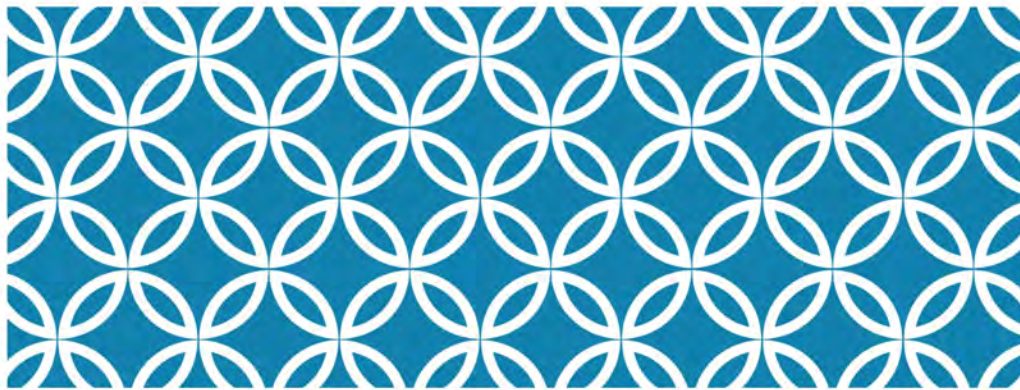
03 Environmental Consequences

05 Conclusion

04 Solutions

Rising temperatures
Causing drought and water shortages across the country, particularly in the south and east

Changing rainfall patterns



THE IMPORTANCE OF WATER(I)

Arantxa Serrano Domínguez 4A

HOW IMPORTANT IS WATER?

Water is one of the most essential resources for human survival , yet it's becoming an increasingly scarce commodity in many parts of the world .

Spain is currently experiencing one of the worst droughts in decades , with reservoirs at dangerously low levels and farmers struggling to keep their crops alive . This is just one example of the water crisis that's affecting many countries around the world.



DID YOU KNOW...?

1.4 million people die annually and 74 million will have their lives shortened by diseases related to poor water, sanitation and hygiene.

Today , 1 in 4 people (2 billion people) worldwide lack access to safe drinking water . Almost half of the world's population (3.6 billion people) lack access to safe sanitation .

Globally, 44% of domestic wastewater is not treated safely .

Global water demand is projected to increase by 55% by 2050.



CHAPTER 4



ERASMUS RANGERS OF CHANGE IN GREECE



23rd -27th October 2023



Work package n°3 – Life & Water in the plastic ocean-
Mobility in Thessaloniki, Greece 2023

No of participants: 129

Our Erasmus+ Project “Rangers Of Change has continued its 3rd mobility of Work Package No 3-“Life & Water in the plastic ocean”.

Our students welcome their colleagues from partner schools in Lithuania, Portugal, Romania and Spain with a marvellous ceremony for students, teachers and parents! Students, guided by their teachers and supported by parents made this day unforgettable!

RANGERS OF CHANGE IN GREECE

DAY 1 - 23th October 2023

Activities at The Environmental Education Centre of Eleftherio-Kordelio:

“Learning about climate change while playing!”. Through a series of activities and games that invite students to active participation, issues related to the causes and effects of climate change are covered, as well as ways to mitigate it and prepare to deal with it.

Mediterranean Sea Workshop: Watching a film related to climate change at the Evosmos Cultural Center.

ROC Activities (drama, creative writing, painting) raised awareness about role of water for human beings and the other plants and animals-ROC activities and campaigns inform teenagers, communities; they change attitudes, practices for environmental protection; participants acquire skills, attitudes through practical, interactive activities, using experiential learning; they achieved collective projects that generate change, through results of proposed learning(individual, school, community level).

Students learnt about climate change while playing.

DAY 2 - 24th October 2023

Day 2-Activities & debate about climate change at the European Information Centre Europe Direct, in Thessaloniki. Students used their skills in an integrated way, integrating education for sustainable development in school curriculum, adapting their ROC activities to local context, linking themes of environmental protection of economy, society, culture, education, heritage, health, social inclusion, according to principles expressed in European Union Strategy.

Workshop: Life & Water in the plastic ocean at Water Supply Museum of Thessaloniki.

Participants used vocabulary related to water crisis correctly, in order to get complex learning experiences, combining non-formal, informal education, respecting education principles for sustainable development (Student-centered, Critical Thinking, Systemic Thinking, Partnership, Participation, Connected to real lives of children and communities, Solution and Action oriented).

Students had a walk along Thessaloniki's seaside. Water pollution workshop – they visited Points of Interest.

Activities at the Center of Education of the Environment and Sustainability Thermis: "Environmental game-issues at the Thermis dam".

Students got to know the park's flora and fauna.

Students had activities in Gerovassiliou winery, the tour comprised the vineyard, the wine-production, bottling, ageing areas and the Wine Museum.

DAY 3 - 25th October 2023

Taking action against water pollution & project dissemination at Centre of Education for the Environment and Sustainability Thermis

Participants raised awareness about plastic pollution, in order to reconnect people with nature; students achieved direct emotional relationship with the environment. Participants became much eager to spend time outdoors, helping to clean water in lakes, rivers, sea. They got connected to virtual media to raise community' awareness on how important is to have clean waters and how dramatic are plastic pollution consequences for their health. Working on ROC activities, our students got ability to relate to environment, finding solutions and efficient ways to protect it. They improved their vocabulary related to pollution through brainstorming and explaining pollution related words/phrases.

ROC students made a change on economic sustainability & environmental education at Gerovassiliou winery and the Wine Museum & Botanical Garden. They debated on role of clean water in the world, efficient ways to stop wasting water, finding ways to supply water to underprivileged groups.

Students created posters and wrote petitions, inviting government, politicians to meetings; they established working plans for each of the above problems. "We help rivers/lakes/sea"

Campaigns-in groups, ROC students organised volunteer working day in which they initiated campaigns of cleaning waters in their community /country, involving families, friends; helping NGOs to collect plastic from these waters.

DAY 4 - 26th October 2023

Participants worked on project goals face to face; discussed all the project issues, sharing, Taking action to Edessa Waterfall-observing & collecting data & environmental education: participants became much eager to spend time outdoors, helping to clean water in lakes, rivers, sea. They got connected to virtual media to raise community awareness on how important is to have clean waters and how dramatic are plastic pollution consequences for their health. Working on ROC activities, our students got ability to relate to environment, finding solutions and efficient ways to protect it. They improved the vocabulary related to pollution through brainstorming and writing pollution related words/phrases in worksheets/articles/surveys/stories; taking turns to read them to families, friends.

Students created posters and wrote petitions, inviting government, politicians to meetings where they could establish working plans for each of the above problems. Water Photography Competitions, Water Poems and Stories competitions were organized, involving participants from each partner school.

DAY 5 - 27th October 2023

Meeting at the Cultural Center of Kordelio. Feedback on activities and learning outcomes- Certificates award & learning outcomes at 2nd Geniko Lykeio Eleftheriou Kordeliou, Thessaloniki, Greece-We are the Green Change!

Socializing activities: Posters competition and humanitarian campaign- students mitigated for clean drinking water; against unsafe water and poor sanitation. Students involved other 2 organizations, 4 politicians, persuaded 3 private companies to get involved as partners, for each stage (local community, Media, government, philanthropic and corporate companies) to support disadvantaged/ disabled people from poor communities to have access to safe clean water. Each school Communication Team identified best channels to use to communicate with stakeholders, to “get the right message to the right person at the right time.”

“No communities without water” Campaign- students found financial resources persuading private companies to invest in achieving accessible clean water.

Erasmus+project “Rangers Of Change”-Work Package “Life&Water in the plastic ocean - mobility in Greece-video

created by Romanian students:

<https://fb.watch/oIcWyxBIBA/>

Erasmus+project “Rangers Of Change”-Work Package “Life&Water in the plastic ocean - mobility in Greece-video

created by Greek students:

<https://fb.watch/oIcYC1srui/>

Erasmus+project “Rangers Of Change”-Work Package “Life&Water in the plastic ocean - mobility in Greece-video

created by Portuguese students:

<https://youtu.be/qjzGR-YIMU4?feature=shared>



RANGERS OF CHANGE IN GREECE

DAY 1 - 23th October 2023 - GALLERY



GREECE

RANGERS OF CHANGE IN GREECE

DAY 2 - 24th October 2023 - GALLERY



GREECE

RANGERS OF CHANGE IN GREECE

DAY 3 - 25th October 2023 - GALLERY



GREECE

RANGERS OF CHANGE IN GREECE

DAY 4 - 26th October 2023 - GALLERY



GREECE

RANGERS OF CHANGE IN GREECE

DAY 5 - 27th October 2023 - GALLERY



GREECE

4.1 ROC Mini-dictionary:

ROC Mini-dictionary

Greek-English

Λέξεις (και οι ορισμοί τους) σχετικές με την κλιματική αλλαγή.

Words (and their definition) related to climate change.

1) Απόβλητα: Θεωρούνται υπολείμματα τροφών και αντικείμενα που έχουν πάψει να υπηρετούν το σκοπό για τον οποίο κατασκευάστηκαν. Τα απόβλητα διακρίνονται σε στερεά και υγρά απόβλητα. Η κακή διαχείριση των αποβλήτων συμβάλλει στην κλιματική αλλαγή και τη ρύπανση του αέρα και επηρεάζει άμεσα πολλά οικοσυστήματα και είδη.

As waste are considered food residues and objects that have ceased to serve the purpose for which they were manufactured. Waste is divided into solid waste and liquid waste. Poor waste management contributes to climate change and air pollution, and directly affects many ecosystems and species.

2) Αποψίλωση των δασών: Η αποψίλωση των δασών είναι η αφαίρεση ενός δάσους του οποίου τα εδάφη χρησιμοποιούνται στην συνέχεια για μη δασικές χρήσεις.

Forest deforestation/ trees deforestation is the purposeful clearing of forested land.

3) Ατμόσφαιρα: Μια ατμόσφαιρα είναι ένα στρώμα αερίου ή στρώματα αερίων που περιβάλλουν έναν πλανήτη και συγκρατούνται στη θέση τους από τη βαρύτητα του πλανητικού σώματος.

Atmosphere: An atmosphere is a layer of gas or layers of gases that envelop a planet, and is held in place by the gravity of the planetary body.

4) Αύξηση του επιπέδου της θάλασσας: Απελευθερώνεται περισσότερο νερό στον ωκεανό, καθώς λιώνουν οι παγετώνες και οι πάγοι της ξηράς. Ο ωκεανός διαστέλλεται καθώς αυξάνονται οι θερμοκρασίες των ωκεανών. Και οι δύο αυτές συνέπειες της κλιματικής αλλαγής επιταχύνουν την άνοδο της στάθμης της θάλασσας σε όλο τον κόσμο, θέτοντας σε κίνδυνο εκατομμύρια ανθρώπους που ζουν σε παράκτιες κοινότητες.

Sea-level rise: More water is released into the ocean as glaciers and land ice melts. The ocean expands as ocean temperatures increase. Both of these consequences of climate change are accelerating sea level rise around the world, putting millions of people who live in coastal communities at risk.

5) Γεωθερμική ενέργεια: Η ενέργεια που προέρχεται από τα μεγάλα ποσά της θερμικής ενέργειας που είναι εγκλωβισμένα στο εσωτερικό της Γης.

Geothermal energy: The energy that comes from the large amounts of thermal energy that are trapped inside the Earth.

6) Διοξείδιο του άνθρακα (CO₂): είναι ένα σημαντικό αέριο που εγκλωβίζει θερμότητα ή αέριο του θερμοκηπίου, που προέρχεται από την άντληση και καύση ορυκτών καυσίμων. Από την αρχή της βιομηχανικής εποχής (τον 18ο αιώνα), οι ανθρώπινες δραστηριότητες έχουν αυξήσει το CO₂ στην ατμόσφαιρα κατά 50% - που σημαίνει ότι η ποσότητα CO₂ είναι σήμερα 150% περισσότερη σε σχέση με το 1750. Αυτό είναι μεγαλύτερο από ότι στην πραγματικότητα συνέβη στο τέλος της τελευταίας περιόδου των παγετώνων 20.000 χρόνια πριν.

Carbon dioxide (CO₂) is an important heat-trapping gas, or greenhouse gas, that comes from the extraction and burning of fossil fuels. Since the beginning of industrial times (in the 18th century), human activities have raised atmospheric CO₂ by 50% – meaning the amount of CO₂ is now 150% of its value in 1750. This is greater than what naturally happened at the end of the last ice age 20,000 years ago.

7) Είδη υπό εξαφάνιση: Τα είδη προς εξαφάνιση είναι τα είδη που πολύ πιθανόν να εξαφανιστούν στο κοντινό μέλλον. Εξαφανίζονται για δυο λόγους: απώλεια φυσικού περιβάλλοντος και γενετικής ποικιλότητας.

Endangered species: Endangered species are the species that are very likely to become extinct in the near future. They become endangered for two main reasons: loss of habitat and loss of genetic variation.

8) Εκβιομηχάνιση: είναι η διαδικασία μεταμόρφωσης της οικονομίας ενός έθνους ή μιας περιοχής από εστιασμένη στη γεωργία σε εξαρτημένη από την βιομηχανοποιημένη παραγωγή. Από την αρχή της Βιομηχανικής Επανάστασης, περίπου το 1750, οι ανθρώπινες δραστηριότητες, όπως η καύση ορυκτών καυσίμων, συμπεριλαμβανομένων του άνθρακα και του πετρελαίου, έχουν αυξήσει τη συγκέντρωση αερίων του θερμοκηπίου στην ατμόσφαιρά μας.

Industrialization is the process of transforming the economy of a nation or region from a focus on agriculture to a reliance on manufacturing. Since the start of the Industrial Revolution, in about 1750, human activities such as burning fossil fuels, including coal and oil, have increased greenhouse gas concentrations in our atmosphere.

9) Εξόρυξη πετρελαίου: Είναι η διαδικασία κατά την οποία ένας σωλήνας/αγωγός διαπερνά την επιφάνεια της γης και μία πηγή εντοπίζεται. Μία αντλία συνδέεται με το σωλήνα/αγωγό και το πετρέλαιο που βρίσκεται κάτω από την επιφάνεια της γης απομακρύνεται με τη βία. Η εξόρυξη σε πιο βαθιά και απομακρυσμένα νερά αυξάνει το ρίσκο κηλίδων, που μπορεί να προξενήσουν ανεπανόρθωτη καταστροφή στον ωκεανό και να απειλήσουν τις παράκτιες επιχειρήσεις και τον τρόπο ζωής των ανθρώπων.

Oil drilling is the process by which tubing is bored through the Earth's surface and a well is established. A pump is connected to the tube and the petroleum under the surface is forcibly removed from underground. Drilling in deeper and more remote waters increases the risk of spills, which can irreversibly damage the ocean, and threaten coastal businesses and people's way of life.

10) Εκπομπές άνθρακα: Πρόκειται ουσιαστικά για το πόσο άνθρακα διοχετεύουμε στην ατμόσφαιρα. Όταν καίμε ορυκτά καύσιμα (όπως ο άνθρακας, το πετρέλαιο και το φυσικό αέριο), εκλύουμε CO₂ στον αέρα.

Carbon emissions: This is basically how much carbon we put in the atmosphere. When we burn fossil fuels (such as coal, oil and gas) we put CO₂ into the air.

11) Επιφάνεια της θάλασσας: Η επιφάνεια της θάλασσας είναι μια μέση επιφανειακή στάθμη ενός ή περισσότερων από τα παράκτια ύδατα της γης από τα οποία μπορούν να μετρηθούν ύψη όπως το υψόμετρο.

Sea level: Sea level is an average surface level of one or more among Earth's coastal bodies of water from which heights such as elevation may be measured.

12) Ερημοποίηση: χαρακτηρίζεται ένας τύπος υποβαθμίσεως της γης, κατά την οποία μια ήδη σχετικώς ξηρή περιοχή γίνεται όλο και ξηρότερη.

Desertification: characterizes a type of land degradation in which an already relatively dry area becomes increasingly dry.

13) Θερμοκρασία: Η θερμοκρασία είναι μια φυσική ποσότητα που εκφράζει ποσοτικά την αντίληψη της ζεστασίας και της ψυχρότητας. Η θερμοκρασία μετριέται με θερμόμετρο.

Temperature: Temperature is a physical quantity that expresses quantitatively the perceptions of hotness and coldness. Temperature is measured with a thermometer.

14) Καυσαέρια: μπορούν να περιγραφούν ως χημικά και τοξικά απόβλητα, όπως το μονοξείδιο του άνθρακα, το διοξείδιο του άνθρακα και το μεθάνιο, που είναι θανατηφόρα για όλα σχεδόν τα είδη ζωής στη γη. Τα καυσαέρια εκλύονται από ορυκτά καύσιμα - κυρίως από εργοστάσια και οχήματα.

Exhaust gasses can be described as chemical and toxic waste, like carbon monoxide, carbon dioxide and methane, which are deadly for most life around earth. Exhaust fumes are emitted by fossil fuels from mostly factories and vehicles.

15) Καύσωνας: είναι μια περίοδος υπερβολικά ζεστού καιρού.

Heatwave is a period of excessively hot weather.

16) Κλιματική αλλαγή: Αναφέρεται σε μακροπρόθεσμες αλλαγές στη θερμοκρασία και τις καιρικές συνθήκες. Οι αλλαγές μπορεί να είναι φυσικές, όπως εξαιτίας διακυμάνσεων στον ηλιακό κύκλο. Ωστόσο, από το 1800 και εξής οι ανθρώπινες δραστηριότητες αποτελούν τον κύριο παράγοντα κλιματικής αλλαγής, κυρίως εξαιτίας της καύσης ορυκτών καυσίμων, όπως ο άνθρακας, το πετρέλαιο και το αέριο. Η καύση ορυκτών καυσίμων ενεργοποιεί την εκπομπή αερίων του θερμοκηπίου, που λειτουργούν σαν μία κουβέρτα τυλιγμένη γύρω από τη Γη, εγκλωβίζοντας την ηλιακή θερμότητα και αυξάνοντας τις θερμοκρασίες.

Climate change refers to long-term shifts in temperatures and weather patterns. These shifts may be natural, such as through variations in the solar cycle. But since the 1800s, human activities have been the main driver of climate change, primarily due to burning fossil fuels like coal, oil and gas. Burning fossil fuels generates greenhouse gas emissions that act like a blanket wrapped around the Earth, trapping the sun's heat, and raising temperatures.

17) Κύκλος του νερού: Είναι η συνεχής ανακύκλωση του νερού της Γης μέσα στην υδρόσφαιρα, στην ατμόσφαιρα και στη λιθόσφαιρα.

The water cycle is the continuous recycling of Earth's water within the hydrosphere, atmosphere and lithosphere.

18) Λειψυδρία: Η έλλειψη νερού.

Scarcity of water: The lack of water.

19) Μετεωρολογικός σταθμός: είναι ένα επίγειο σημείο στο οποίο πραγματοποιούνται τακτικές μετεωρολογικές παρατηρήσεις.

Meteorological station: it is a facility on land for measuring atmospheric conditions.

20) Οικοσύστημα: Φυσικοί βιότοποι που υποστηρίζουν διαφορετικά είδη ζωικής ή φυτικής ζωής.

Ecosystems: Natural habitats that support different kinds of animal and plant life.

21) Όξινη βροχή: Είναι η βροχή ή κάθε άλλη μορφή υδατόπτωση που είναι ασυνήθιστα όξινη, δηλαδή περιέχει αυξημένα επίπεδα ιόντων υδρογόνου.

Acid rain is rain or any other form of precipitation that is unusually acidic, meaning that it has elevated levels of hydrogen ions.

22) Πανίδα: είναι οι έμβιοι οργανισμοί όπως ζώα και πτηνά που ζουν γύρω μας.

Fauna are the living organisms such as animals and birds that live around us.

23) Περιβάλλον: είναι ότι υπάρχει γύρω μας.

Environment is whatever encompasses us.

24) Πλημμύρα: είναι η διάχυση του νερού στη στεριά είτε λόγω μίας υπερχείλισης ενός ποταμού ή μίας λίμνης ή λόγω κάποιας φυσικής καταστροφής από έντονη βροχόπτωση.

A flood is the spreading of water over land either due to an overflowing of a river or a lake or due to some natural disaster from heavy rainfall.

25) Ρύπανση του αέρα: Είναι η μόλυνση του εσωτερικού ή εξωτερικού περιβάλλοντος από οποιοδήποτε χημικό, φυσικό ή βιολογικό παράγοντα/στοιχείο που τροποποιεί τα φυσικά χαρακτηριστικά της ατμόσφαιρας.

Air pollution is contamination of the indoor or outdoor environment by any chemical, physical or biological agent that modifies the natural characteristics of the atmosphere.

26) Στάθμη της θάλασσας: χαρακτηρίζεται το εκάστοτε ύψος του επιπέδου της επιφάνειας της θάλασσας από το βυθό.

Sea level: it is characterized by the height of the level of the sea surface from the bottom.

27α) Τρύπα του όζοντος: Η καταστροφή του όζοντος αποτελείται από 2 συσχετιζόμενα γεγονότα που παρατηρήθηκαν το 1970, μια σταθερή μείωση κατά περίπου 4 τοις εκατό της συνολικής ποσότητας όζοντος στην ατμόσφαιρα της γης και μια πολύ μεγαλύτερη μείωση του στρατοσφαιρικού όζοντος. Το τελευταίο φαινόμενο αναφέρεται ως τρύπα του όζοντος.

Ozone hole: Ozone depletion consists of two related events observed since the late 1970s: a steady lowering of about four percent in the total amount of ozone in Earth's atmosphere, and a much larger decrease in stratospheric ozone around Earth's polar regions. The latter phenomenon is referred to as the ozone hole.

27β) Τρύπα του όζοντος: ονομάζεται το φαινόμενο κατά το οποίο το στρώμα του όζοντος που βρίσκεται στα ανώτερα στρώματα της ατμόσφαιρας της Γης (στρατόσφαιρα) μειώνεται σε πάχος πάνω από την Ανταρκτική.

The ozone hole is the name given to the phenomenon in which the ozone layer located in the upper layers of the Earth's atmosphere (stratosphere) decreases in thickness over Antarctica.

28) Υδροστρόβιλος: οι υδροσίφωνες είναι κατακόρυφες δίνες συμπυκνωμένων υδρατμών που προεξέχουν από τη βάση καταιγιδοφόρων νεφών και αλληλοεπιδρούν με μια υδάτινη επιφάνεια.

Waterspout: Hydrosprouts are vertical eddies of condensed water vapor that protrude from the base of storm clouds and interact with a water surface.

29) Υπεραλίευση / υπεραλιεία: Είναι το ψάρεμα πάνω από τα όρια που οδηγεί σε καταστροφή των υδάτινων οικοσυστημάτων μέσω της εκτεταμένης μείωσης του αριθμού των υδρόβιων οργανισμών και ενίοτε της πλήρους εξαφάνισής τους από τους βιοτόπους τους. Μπορεί να αλλάξει το μέγεθος των ψαριών που απομένουν, καθώς και τον τρόπο αναπαραγωγής και την ταχύτητα με την οποία ωριμάζουν. Όταν υπερβολικά πολλά ψάρια αλιεύονται από τον ωκεανό δημιουργείται ανισορροπία που μπορεί να διαρρήξει την τροφική αλυσίδα και να οδηγήσει στον αφανισμό άλλων σημαντικών μορφών θαλάσσιας ζωής, συμπεριλαμβανομένων ευάλωτων ειδών, όπως οι θαλάσσιες χελώνες και τα κοράλλια.

Overfishing is fishing beyond limits that leads to the destruction of aquatic ecosystems through the excessive reduction in the number of aquatic organisms and sometimes their complete disappearance from their habitats. It can change the size of fish remaining, as well as how they reproduce and the speed at which they mature. When too many fish are taken out of the ocean it creates an imbalance that can erode the food web and lead to a loss of other important marine life, including vulnerable species like sea turtles and corals.

30) Υπερθέρμανση του πλανήτη: είναι η τρέχουσα αύξηση της θερμοκρασίας του αέρα και του νερού.

Global warming is the current raise in temperature of the air and ocean.

31) Φαινόμενο του θερμοκηπίου: είναι η διαδικασία κατά την οποία η ατμόσφαιρα ενός πλανήτη συγκρατεί θερμότητα και συμβάλει στην αύξηση της θερμοκρασίας στην επιφάνεια του.

Greenhouse effect is a process that occurs when energy from a planet's host star goes through its atmosphere and heats the planet's surface.

32) Χαλάζι: το χαλάζι, είναι μία μορφή βροχόπτωσης, που πέφτει από τον ουρανό, όχι υπό μορφή βροχής, αλλά υπό μορφή "παγωμένης" βροχής, ή πιο απλά, υπό μορφή παγωμένων σφαιριδίων.

Hail: it is a form of precipitation that falls from the sky, not in the form of rain, but in the form of "frozen" rain, or more simply, in the form of frozen pellets.

33) Χλωρίδα: είναι τα φυτά και τα δέντρα που υπάρχουν σε έναν τόπο.

Flora is the plants and trees that exist in a place.

Ιδιωματικές φράσεις

Idioms

1) Βρέχει καρεκλοπόδαρα: βρέχει πολύ έντονα.

It's raining chairlegs: It's raining very heavily. – Αγγλικό αντίστοιχο: It's raining cats and dogs.

2) Βρέξει χιονίσει: υπό κάθε συνθήκη.

Come rain or snow: under every condition. – Αγγλικό αντίστοιχο: Come rain or shine.

3) Χαλάει ο κόσμος / Χαλασμός Κόσμου: Η συγκεκριμένη φράση χρησιμοποιείται για να δηλώσει ότι συμβαίνει ένα πολύ έντονο καιρικό φαινόμενο.

The world breaks down: This particular phrase is used to indicate that a very intense weather phenomenon is occurring. - Αγγλικό αντίστοιχο: -----

4) Σαν τα χιόνια (San ta xionia): Για κάποιον που εμφανίζεται μετά από μακρά απουσία.

Like snow: For someone who shows up after a long absence. – Αγγλικό αντίστοιχο: Long time no see.

5) Ο καιρός είναι γιατρός (O kairos einai giatros): Με το πέρασμα του χρόνου κάθε ψυχικός πόνος μειώνεται.

The weather is a doctor: With the passage of time any mental pain diminishes. – Αγγλικό αντίστοιχο: Time heals all wounds.

6) Πήραν τα μυαλά του αέρα: Η φράση χρησιμοποιείται για ανθρώπους ελαφρόμυαλους που μιλούν ή φέρονται υπερφίαλα και αλαζονικά. Η σιγουριά τους είναι απερίσκεπτα μεγάλη και συνήθως δεν ακούνε τα λόγια και τις συμβουλές των γύρω τους με αποτέλεσμα πολλές φορές οι αποφάσεις που παίρνουν να αποβαίνουν μοιραίες για τους ίδιους.

His brains took air: The phrase is used for people who speak or act/ behave arrogantly and conceitedly. Their confidence is so recklessly high that they usually ignore the words and advice of others and as a result their decisions often end up being disastrous for them.

Αγγλικό αντίστοιχο: Get ahead of oneself.

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4.2 ROC True stories:

Students in Greece imagined they were journalists and wrote articles based on true stories that have already happened:




A true story,
about extreme weather phenomena
that occurred in Greece.

By Mariena Papadopoulou
& Maria Bechtzi

• **Secondary effects include:**

- more difficult water supply due to its contamination, resulting in a lack of clean drinking water.
- more difficult food supply, resulting in food shortages. Entire crops can be destroyed.
- vegetation: many species may become extinct.
- the consequences of floods are long-lasting.
- economic distress due to a temporary decrease in tourism, rising food prices and restoration costs.




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Now let's talk about the causes of floods...

- As a natural phenomenon, floods cannot be prevented. Careless human activity is an important factor in floods, as it is a result of heavy rainfall, melting snow, etc. The pollution of the environment resulting from climate change directly affects the consequences of floods, since it increases their intensity and sometimes prevents their possible prediction.




Floods usually have primary and secondary consequences :

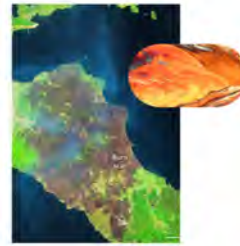


- **Primary consequences include:**
 - damage or partial/total destruction of bridges, vehicles, buildings, houses, communication systems, drainage systems, road networks and other basic infrastructure.
 - losses: drowning of people or animals, as well as causing epidemics and diseases.

- One of the tourists that was trapped there, was interviewed by a Greek channel and he confessed that when they were in there, they would get very terrified because they couldn't hear or see what was happening outside. Based on what the tourist said, they were waiting for many hours for them to be saved but everyone remained calm and in good health.



- Major problems were caused by an intense storm and hailstorm in Thessaloniki on Thursday, May 10, 2018. Shops and roads were flooded, while areas were left without water and electricity. The roads were blocked because of traffic jams. The Fire Department received hundreds of calls for pumping water and extricating people.
- One of the calls was for the release of visitors to the White Tower, who due to the storm and the accumulation of water at the main entrance could not leave. Those that were trapped were students and tourists who visited the White Tower and finally got out through a ground-floor window, after firefighters had previously chainsawed its railings.



Ships leaving the Lake Evia for Central Greece, with inhabitants who had no other escape route, sailing in a sea red from the mirage of the fire. The ramifications of the disaster, mainly for the residents of the area but not only for them, are many. The consequences were also disastrous for those involved in tourism, since they have started a race to be able to repair the burnt area by the next tourist season.

FIRES IN GREECE

Hundreds of forest fires broke out in the summer of 2021 in Greece, most of them in August due to unprecedented heat turning a total of 1,301,239 acres and households into ashes. 3 people got killed and at least 20 got injured. A historic heatwave record for the country was broken, with the highest temperatures reaching 47.1 °C (116.8 °F). Authorities had to evacuate several residential areas, such as villages and towns, putting the lives of their own in danger. According to BBC News, this was the worst heatwave to be recorded since 1987 in Greece. These fires were the worst fires in Greece since the 2007 Greek forest fires which burnt more than double the area (270,000 hectares) of the 2021 fires (125,000 hectares).



Over 700 residents were evacuated or rescued, mainly from the seaside settlements located north of the port town of Rafina, namely Kokkino Limanaki and Mati, where rescuers found 26 corpses trapped just metres away from the sea, apparently hugging each other as they died. Boats also recovered corpses from the water, and rescued hundreds of people from beaches and the sea. Two heroic people drowned when the boat rescuing them from a hotel in Mati capsized. More than 4,000 residents were affected by the wildfires.



ATTICA'S 2018 TRAGEDY

A series of wildfires in Greece, during the 2018 European heat wave, began in the coastal areas of Attica in July 2018. 104 people were confirmed dead from the Mati fires (the last died in October 2022, from health problems which was caused because of the fire). The fires were the second-deadliest wildfire event in the 21st century, after the 2009 Black Saturday bushfires in Australia that killed 173.

The fire started on August 3 from Central Evia. For ten consecutive days it burned everything in its path resulting in more than 512,000 acres of burned forest. Records speak of more than 512,000 hectares of burned forest, making the disaster the biggest ever in Greece from a fire.

Residents, volunteers and firefighters fought the fire non-stop for days, with their lives constantly in danger.



THE INCIDENT OF EVIA 2021



THE EVENT OF 2007

The 2007 Greek forest fires were a series of massive forest fires that broke out in several areas across Greece throughout the summer of 2007. The most destructive and lethal infernos broke out on 23 August, expanded rapidly and raged out of control until 27 August, until they were finally put out in early September. The fires mainly affected western and southern Peloponnese as well as southern Euboea. The death toll in August alone stood at 67 people. In total 84 people lost their lives because of the fires, including several fire fighters.

Hot temperatures, including three consecutive of over 40 °C (105 °F), and severe drought rendered the 2007 summer unprecedented in modern Greek history. From the end of June to early September, over 3,000 forest fires were recorded across the nation. Nine more people were killed in blazes in June and July.



Total of 2,700 square kilometers (670,000 acres) of forest, olive groves and farmland were destroyed in the fires, which was the worst fire season on record in the past 50 years. Of the total of 2,700 km², 1,500 km² (370,000 acres) were burnt forests in Southern Greece alone which meant that 4% of Greece's total forest area burnt in 2007 alone. Many buildings were also destroyed in the blaze. The fire destroyed 1,000 houses and 1,100 other buildings, and damaged hundreds more.



"THE COUNTRY IS GOING THROUGH AN UNSPEAKABLE TRAGEDY".

The Greek prime minister Alexis Tsipras declared a state of emergency in Attica, and announced a three-day period of national mourning, starting in a televised address.

THANK YOU!

Sofia Saharidou
Elenora Stavrou




ERASMUS+ PROJECT "RANGERS OF CHANGE" - 109

4.3 ROC Haiku on climate change

haiku (Japanese poem) on the topic of climate change:

Painting by Vasiliki



Plant trees save wild lives
Save environment, nature
Nice days will come soon.
Gloria

ΠΗ ΧΡΑΣΜΟΡΕΤΕ ΠΟΛΛΑ
ΠΑΛΙ ΤΙΝΑ!



Plant trees colour
the earth will lose this colour
and plants will lose it
The world is perfect
with climate change it not
we need to save it
Maria

Painting by Evmorfia



In silent motion
we achieve a lot with the
goal
of saving the world
Meg!

Haiku on Climate Change
2nd Gen. Lykeia Hefthera-Kordano



GREECE

Painting by Evmorfia



Clean air not to breathe
Flowers struggle to resist
Earth hopes for my help
My trees not so green
My blue sea is not that
clear
Desert my worst fear
Mary

Painting by Stamatia



When the clouds come into sky
the rain starts to rise
Let's help the world change
Come on Rangers of Change
For a better future
Ann

4.4 ROC PPTs on climate change:

PPTs on climate change: in groups, Greek students achieved PPTs on effects of climate changes that affect our environment, health and biodiversities:

CLIMATE CHANGE
Causes & Effects

there is no planet B

By Maria Bechta & Juliana Papadopoulou

Nearly all land areas are seeing more hot days and heat waves. Higher temperatures increase heat-related illnesses and make working outdoors more difficult. Temperatures in the Arctic have warmed at least twice as fast as the global average. The rate at which the ocean is warming strongly increased over the past two decades, across all depths of the ocean. Melting ice sheets also cause sea levels to rise, threatening coastal and island communities. In addition, the ocean absorbs carbon dioxide, keeping it from the atmosphere. But more carbon dioxide makes the ocean more acidic, which endangers marine life and coral reefs.

Private transport is one of the world's biggest sources of greenhouse gases, with emissions rising every year. Most cars, trucks, ships and planes run on fossil fuels. That makes transportation a major contributor of greenhouse gases, especially carbon-dioxide emissions. In addition, emissions from ships and planes constitute a great factor of chemical substance growth. Transport accounts for nearly one quarter of global energy-related carbon dioxide emissions.

Manufacturing and industry produce emissions, mostly from burning fossil fuels to produce energy for making things like cement, iron, steel, electronics, plastics, clothes, and other goods. Machines used in the manufacturing process often run on coal, oil, or gas, and some materials, like plastics, are made from chemicals sourced from fossil fuels.

As a conclusion, we can see there are many effects of climate changes that seriously affecting our environment, health and biodiversities. If we still have not take any actions to prevent the climate changes, our mother earth will be become sick more seriously. Furthermore, when the deforestation continuing occurs, there will be having many different consequences to our environment. So, to protect our environment and to save the big gods ration to have a better place to stay, we must always remember that there is climate change is a well possibility of the trees, save energy, car-pooling, etc. Therefore, let us together to protect and love our beautiful mother earth that given by God and try to keep her healthy as long as we can.

Thank you for your time!

Sources

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- <http://www.environmentalaction.org/education>
- <https://www.epa.gov/climate-change/effects>
- https://www.nasa.gov/climate_change/related/
- <https://www.epa.gov/climate-change/what-does-climate-change-do-to-us>
- <http://www.ips.org/News/ClimateChangeEffects/ClimateChangeEffects.html>

All the causes are giving a great impact for climate changes in our earth. What are the consequences of these causes for the climate changes in our world?

- Hotter temperatures & a warming, rising ocean
- Increased drought
- More severe storms
- Loss of species

Climate change is changing water availability, making it scarcer in more regions. Global warming exacerbates water shortages in already water-stressed regions, and is leading to an increased risk of agricultural droughts affecting crops, and ecological droughts increasing the vulnerability of ecosystems. Droughts can also stir destructive sand and dust storms that can move billions of tons of sand across continents. Deserts are expanding, reducing land for growing food.

Climate change is a worldwide phenomenon that has a lot of impact on our everyday life. It describes a change in the average conditions over a long period of time. There are lots of factors that contribute to Earth's climate. For instance:

- The increased usage of transportation
- The excessive production of manufacturing goods
- The shortage of trees

Destructive storms have become more intense and more frequent in many regions. As temperatures rise, more moisture evaporates, which exacerbates extreme rainfall and flooding, causing more destructive storms. Cyclones, hurricanes, and typhoons feed on warm water at the ocean surface. Such storms often destroy homes and communities, causing deaths and huge economic losses.

Climate change poses risks to the survival of species on land and in the ocean. These risks increase as temperatures climb. One million species are at risk of becoming extinct within the next few decades. Forest fires, extreme weather, and invasive pests and diseases are among many threats related to climate change. Some species will be able to relocate and survive, but others will not.

- Cutting down forests to create farms or pastures, or for other reasons, causes emissions, since trees, when they are cut, release the carbon they have been storing. Each year approximately 12 million hectares of forest are destroyed. Since forests absorb carbon dioxide, destroying them also limits nature's ability to keep emissions out of the atmosphere.

Climate Change



Sofia Saliaridou
&
Ioanna Stavretti
A3

Action Plan

- 1. Be Green!**
Avoid using fuel-consuming vehicles and take public transportation or bicycle rides.
- 2. Less energy**
Become energy efficient by turning off unnecessary appliances.
- 3. Recycle**
Recycling is the best investment! It is eco-friendly and helps in waste elimination.
- 4. Educate!**
You can help protect the planet by educating others about the dangers of climate change.




Introduction

Contents of this presentation

| | |
|-------------|--------------------------------------|
| Definition: | What climate change is |
| History: | How it all started |
| Causes: | What are the roles of it |
| Effects: | What are the outcomes of this factor |
| Prevention: | How can it be avoided |
| Action: | What should be done |

Water in climate change



| | |
|-------------------------|-------------------------|
| 9,700 Liters in 2020 | 6,800 Liters in 2018 |
| 8,030 Liters in 2019 | 7,568 Liters in 2017 |

Expenditures in the world economy



| | |
|----------------------|----------------------|
| Asia: 23.8% | Europe: 15.0% |
| Africa: 7.5% | North America: 22.5% |
| South America: 23.8% | Oceania: 7.5% |

World saving tips

- Eco light**
Switching our main energy sources to clean and renewable sources.
- Bio fruits**
Organic agriculture can help abate climate change.
- No plastic**
Say no to disposable plastic cutlery, plastic straws and other single-use plastics.



A picture is worth a thousand words!



History of Climate Change

Earth's climate has changed throughout the centuries. Just in the last 800,000 years, for instance, there have been 8 cycles of ice ages and warmer periods, with the end of the last ice age about 11,700 years ago marking the beginning of the modern climate era and the start of human civilization. The current rise in global average temperature is more rapid than previous changes and is primarily caused by humans.

The history of scientific discovery of climate change began in the early 18th century when ice ages and other natural changes in paleoclimates were first suspected and the natural greenhouse effect was first identified by Joseph Fourier. Although, the first person to analyze and consequently discover climate change as a phenomenon was Eunice Foote.

Being 37 years of age, she made her first climate breakthrough. The experiment that she performed, which led her to her finding, included two glass cylinders, two thermometers and an air pump.

1 What is the climate change?

Climate change also known as Global warming defines the occurring increase of the average global temperature.

Causes of climate change

- Waste**
The consumption of goods such as electronics and plastics often end up as junk. This causes to bring problems like water contamination and gas release to the atmosphere.
- Breeding**
Hyperproduction of food that causes emissions of carbon dioxide and other greenhouse gases, along with other occurrences such as deforestation by cows and sheep leads to climate change.
- Deforestation**
Cutting down forests to provide goods causes the production of carbon dioxide which contributes to the global greenhouse gas emissions.
- Industry**
Manufacturing and industry produces emissions, mostly from burning fossil fuels. It is the most fatal contributor to greenhouse events.



Consequences

| | |
|----------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
|  Sea Level Rise | The ocean soaks up most of the heat from global warming. |
|  Extreme weather conditions | Destructive storms have become more intense or more frequent in many regions. |
|  Increased precipitation | More moisture-soaked air masses over land or converging into a storm system. |
|  Risks to the nature | Climate change poses risk to the survival of species on land and in the ocean. |

Thank you!

Credits:
<https://climate.nasa.gov/evidence/>
<https://www.un.org/en/climateaction/glossary/cause-effects-climate-change/>
https://www.actionclimatechange.org/en/climate-change/facts-you-can-do-to-prevent-climate-change/?_afid=020289****

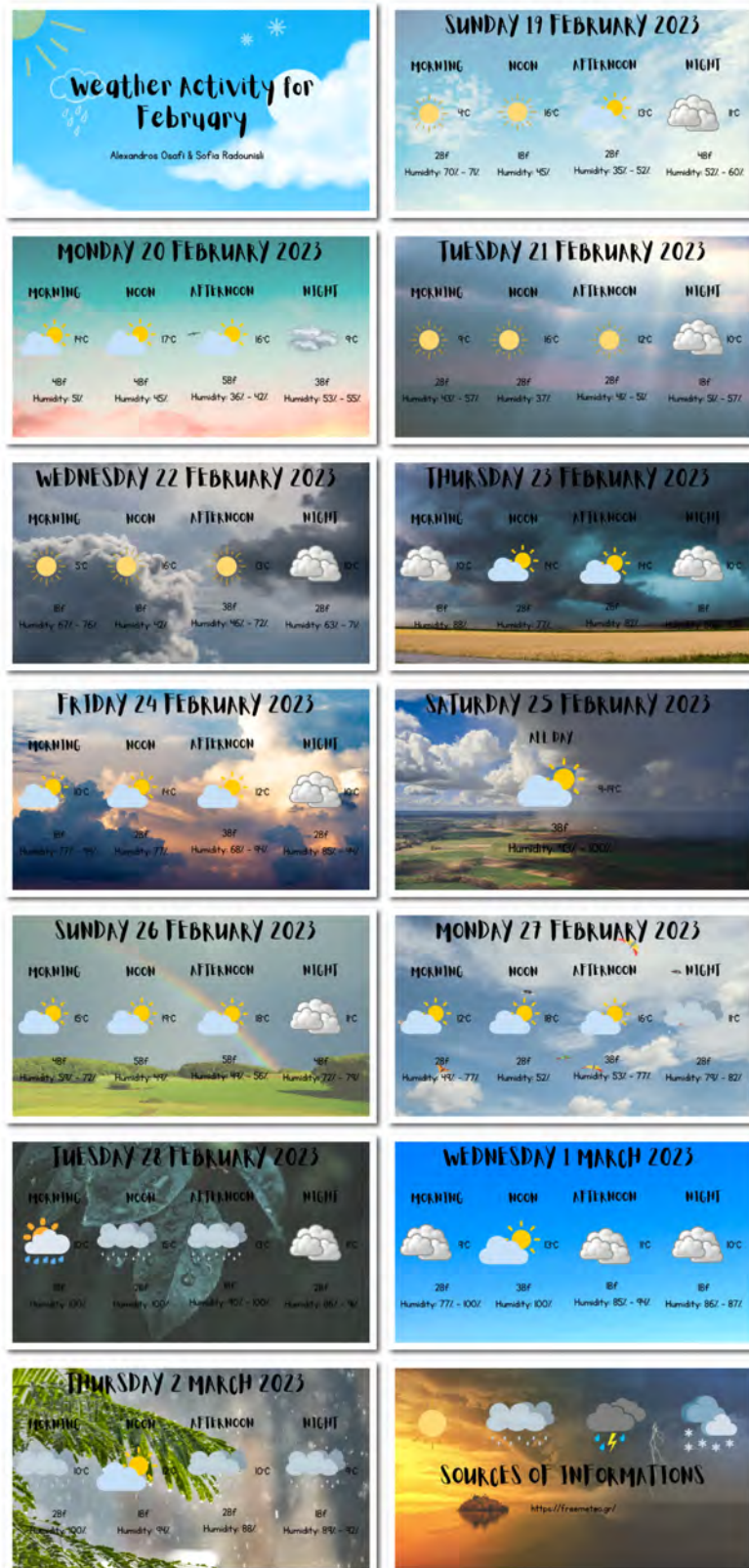


Ioanna Stavretti & Sofia Saliaridou

4.5 ROC “Weather station at my school”

Greek students became their school scientists, keeping a diary of temperatures, weather conditions and cloud types that they saw above their school over the course of 2 weeks, comparing results:

https://www.canva.com/design/DAFbCXE2pTA/g1WwPaT18TvNdUrTrJ3pSg/view?fbclid=IwZXh0bgNhZW0CMTAAAR1eyFCPNfs5HW43paRO9DLnxA8XodLN9fqSMBTwnT WX00d60ir2Uix9YURI_aem_-hBkmfdEfQTLcgclQw4tWg#14



GREECE

4.6 ROC "Art tackles plastic pollution in our rivers/lakes /oceans/seas"

following Alejandro Duran's initiative, Greek participants engaged communities in environmental art making, producing community-based art works; they created works of art using small plastic objects, recovered from beaches, forests:



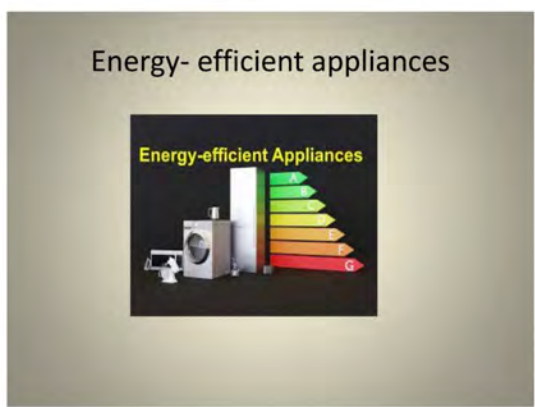
GREECE

4.7 ROC Green Shopping Guide

Greek students recommend environmentally friendly products, from biodegradable phone cases and cruelty-free beauty products to backpacks made of recycled billboards and refillable soap dispensers:



- All this examples that I showed you can help the environment so much especially when you use them everyday.
- They can be a little more expensive but we don't need to waste so much products and this ideas are a more environmentally friendly to use.
- Anthi Zacharia





Buy Local

If possible, always shop environmentally friendly by purchasing your products from local companies and stores. Shopping local means you're buying items that were manufactured in your immediate area, which is an easy way to increase your eco-conscious shopping.


The logic is simple: When you ship products over long distances, the airplanes, trucks, and cars used in that transportation emit greenhouse gases that contribute to air and land pollution. In other words, an apple grown 30 miles away is usually far more eco-friendly than one that traveled 3,000 miles to reach your grocery store. If the products were locally harvested or made, the environmental impact is usually lower.



Choose Organic and Natural Products

Buying organic and natural products helps both sides because it encourages companies to create, stock, and sell more eco-friendly products. This includes organic foods as well as cleaning products made from natural materials, using sustainable processes and resources instead of strong chemicals.

It's simple supply and demand in action. When your shopping cart is full of environmentally friendly items, you're telling companies that you value the health of the planet, and you appreciate that they want to lessen their impact on the environment too.





Shop at Eco-Friendly Stores

These shops and eco-friendly websites stock a plethora of environmentally friendly products, and you can get almost anything you want from these stores, from biodegradable phone cases and cruelty-free beauty products to backpacks made of recycled billboards and refillable soap dispensers. Even if you love the convenience of online shopping, many eco-friendly online stores employ sustainable packaging so you can continue your sustainable shopping on the internet.





Buy in Season

Every season features a wide range of fruits, vegetables, and other produce that naturally grows during that time. For instance, apples and acorn are abundant in September and October. Buying "in season" means that you get the best possible product, with the least environmental impact.

However, your average grocery store seems to have everything on its shelves all year long. No matter what you need or when you need it, you can quickly rush to the store and buy it. While this is definitely convenient, it is definitely not eco-friendly.

Buying in-season supports local farming while ensuring that you get the freshest fruits and vegetables. To get the freshest in-season produce, visit your local farmer's market.



Bring your Own Bag

You can use jars, jars, or boxes at home to store all kinds of products. The reusable bags are the perfect complement for our purchases. They are durable and do not have as negative an impact as plastic.

There's also the option of bioplastic bags. These can be used as a container for organic garbage. They can also be made of paper, which takes care of the environment. If you opt for the plastic bag, make sure it is made with recycled materials and is reusable.



What is Green Shopping?

Climate change threatens our entire planet, but your shopping habits can help in the fight against it! Many individuals, companies, and governments have begun to support social responsibility efforts, such as carbon footprint reductions, the growth of green technology like solar power. Today, businesses around the world now choose to create and stock sustainable products, as many mindful shoppers are now considering a good's impact on the planet before a good's price.

But what should we do more specifically?



Don't Shop Hungry

Another fairly common mistake is shopping on an empty stomach. Hunger drives you to buy more products than you really want or would not choose if you had already eaten. Try to go to the supermarket without hunger, otherwise, you will fill the cart with things you do not need.



Reduce Your Online Order Deliveries

Many people love online shopping because it's very convenient and faster. Many leading eco-friendly stores even sell their products online. However, shopping from an online retailer might be doing more harm than good to the environment because many retailers use shipping and packaging options that can harm the environment.

To be as eco-friendly as possible with your online shopping, you can reduce your orders to once a week and purchase in bulk. Making multiple small purchases means more shipments to your home in several boxes, but a larger single order can lessen the impact on the environment by consolidating the packaging and limiting the number of trips involved in delivering your products.

You can still buy eco-friendly products online, but when you take the extra step to consider the impact of shipping your goods, you'll do even more to support environmentally friendly shopping.




Thank you for your attention!

We hope you enjoyed our presentation and found it interesting as well as helpful!

By: Ektenidi Anastasia
Tzima Sofia
Fotini Koyrtsalidou =)

4.8 ROC Articles on topics:

"Fewer cars on roads", "NO plastic or paper packaging!":

NO PLASTIC OR PAPER PACKAGING



Packaging plays a critical role in feeding people around the world. We are taking a circular approach when designing our food packages, to optimise the use of resources along the packaging value chain.

Our ambition is to create "the world's most sustainable food package", solely made from responsibly sourced renewable or recycled materials, fully recyclable and carbon neutral¹.

With our four focus areas we aim to enable the use of renewable materials, maximise the value of recycled material, minimise littering and make sure the package of the future is designed for recycling.



"Fewer cars on roads" More cars mean more roads need to be built, which causes water run-off that contributes to ground and water pollution.



"No plastic or paper packaging" Many companies are switching to paper packaging instead of plastic packaging. However, switching to paper also has its environmental issues.



"Buy recyclable items" Buying Recycled Products Keeps Our Landfills from Overflowing.



"Don't buy what you don't need" Get your friends and supportive family members in the loop. Enlist their help in controlling your urges to spend money on things that you don't need.




CHAPTER 5



ERASMUS RANGERS OF CHANGE IN PORTUGAL



26th February-1st March 2024

Work package n°4 -Action 2- Buy less! Recycle! -

Mobility in Soure, Portugal 2024

172 participants

Our Erasmus+ Project "Rangers Of Change has continued its 4th mobility of Work Package No 4-Action 2-" Buy less! Recycle!" Portuguese students welcome their colleagues from partner schools in Greece, Lithuania, Spain and Romania.

RANGERS OF CHANGE IN PORTUGAL

DAY 1 - 26th February 2024

On Monday, 26th February 2024 teachers & students from Greece, Lithuania, Spain and Romania were welcome at Agrupamento de Escolas Martinho Árias - Soure, Portugal and worked together to integrate education for sustainable development in school curriculum, linking themes of recycling to economy, society, culture, education, heritage, health, social inclusion.

ROC Students attended welcoming ceremony for Work Package Action 2: "Buy less! Recycle!" at AEMAS- Soure, Portugal. Our world and climate face new and complex challenges in 2024. Students exchanged information and updated each other on the last months campaigns- Green Shopping Guide; Buy Less Day; "Repurpose Challenge Day"; "Zero Waste Strategy" During first day, teachers and students from all partner schools started Work Package Action 2: "Buy less! Recycle!" at AEMAS, working on the importance of trees in urban areas; together, they initiated a native trees planting activity in collaboration with Soure Town Hall.

DAY 2 - 27th February 2024

Day 2: teachers and students worked on project goals face to face and discussed project issues. In Coimbra, participants had a meeting with the specialists on sustainable education projects at Europe Direct, where they also had activities& ROC Project dissemination at Europe Direct Office on European Green Deal priorities.

They linked themes of environmental protection of economy, society, culture, education, heritage, health, social inclusion; taking positive action helps reduce anxiety and powerlessness.

Workshop- participants made their campaigns public, encouraged people to think smart, reuse, recycle before buying. They met specialists and talked about causes of globalization, how to manage it. Students had an experiential activity: "The Green Walk" in the Botanical Garden of Coimbra Students wrote down things they do to help the environment. They practised on environmental issues using their own actions, keeping personal connections with places, maintaining cultural ties.

Students presented ideas, viewing problems as solvable, making achievable goals.

During Action 2: "Buy less! Recycle!"-students worked together at University of Coimbra, doing activities on urban planning, sustainability and pollution.

DAY 3 - 28th February 2024

Day 3-Taking action & project dissemination at Coimbra Town Hall, meeting specialists on Sustainable Development; Circular Economy and selective collection management of municipal solid waste.

Participants initiated activities, campaigns, workshops that provided benefits by informing, changing attitudes, acquiring skills, using experiential learning.

During ROC common activities students practised and improved their level of English, they learnt to find and sustain specific arguments, learnt to persuade people to take action on recycling; to communicate and measure what matters to ROC project.

At the end of each activity, they decided what changes may be required for future activities to keep the project moving in the right direction.

DAY 4 - 29th February 2024

Taking action to Biodiversity observation in sensitive ecosystem of Ria de Aveiro in non-polluting vessels.

Students found out that Global aquatic biodiversity keeps declining rapidly, despite international efforts providing a variety of policies and legislations that identify goals for, give directions to protecting the world's aquatic fauna and flora.

Salt flats and local economy: Solar salinas are man-made systems exploited for the extraction of salt, by solar and wind evaporation of seawater. Salt production achieved by traditional methods is associated with landscapes, environmental and patrimonial values generated throughout history. This activity has been facing a marked decline in Portugal, making it necessary to find a strategy to reverse this trend.

Aveiro-a new perspective into ceramics: environmental commitment and social responsibility - sustainable products and facilities at a sustainable factory. Founded in 1998, the Portuguese company has developed a unique expertise in designing and manufacturing fine stoneware products, from tableware, kitchenware and bakeware to decorative pieces.

This expertise relies on an outstanding knowledge of ceramic craftsmanship from the very beginning, combined with the best local clays and the latest technologies, using a unique sustainable formula at high-temperature.

DAY 5 - 1st March 2024

ROC Certificates award and learning outcomes at AEMAS-" We are the Green Change!" "Buy less! Recycle!"-Reflection on benefits of shopping seasonal and local products Teachers' meeting: reflection & planning of the next Working Package. Reflection on the benefits of shopping seasonal and local products - Feedback on activities and learning outcomes.

DAY 5 - 1st March 2024

Our project activities at the Portuguese school involved children, teenagers and adults in climate solutions, using the creativity of teachers, students and their families to develop and implement these solutions in their homes, schools and communities, our priority being inclusion and diversity. Our motivation for the project activities was based on recent research showing that climate change education helps students develop a strong personal connection to climate solutions, impacting student behaviours and decisions. The climate solutions in ROC project activities increased teenagers' capacity to achieve knowledge about "ecological competences"; students have developed skills that will enable them to apply their knowledge in the real world, including problem solving, critical thinking, teamwork using empathy and negotiation. ROC activities have helped our students use these transferable skills in their future jobs and become engaged citizens.

<https://youtu.be/cqaX7m5ZTBw?si=srJ847f10kqKQm40>



RANGERS OF CHANGE IN PORTUGAL DAY 1

26th February 2024 - GALLERY



PORTUGAL

RANGERS OF CHANGE IN PORTUGAL DAY 2

27th February 2024- GALLERY



PORTUGAL

RANGERS OF CHANGE IN PORTUGAL DAY 3

28th February 2024 - GALLERY



PORTUGAL

RANGERS OF CHANGE IN PORTUGAL DAY 4

- 29th February 2024 - GALLERY



PORTUGAL

RANGERS OF CHANGE IN PORTUGAL DAY 5

- 1st March 2024 - GALLERY



PORTUGAL

5.1 ROC Mini-dictionary:



CLIMATE CIVIL DISOBEDIENCE

Civil disobedience is basically a popular action consisting on disobeying of a given law. This happens when a group of citizens understands that a certain law, or simply the absence of it, produces injustice. Therefore, disobedience is an act of disrespect to the law that aims to promote social justice.

EXTREME TEMPERATURES

Very hot and very cold. These extreme temperatures are variations of environmental conditions that cause discomfort to humans and other living beings to damage to the organism, thus having more or less serious consequences on ecosystems.

CLIMATE CHANGES

Climate changes are the variations in climate over a given period of time that can be caused by natural phenomena or human activities.

GLOBAL WARMING

Global warming is the increase in the average global temperature, caused by natural and human factors that can lead to the environment suffering serious consequences.

CLEAN AND SUSTAINABLE ENERGIES

Sustainable energy is generated to meet an energy need, without compromising the environment and the ability of future generations to meet their own needs. The energy sources capable of generating sustainable energy are renewable and clean. In other words, they are the opposite of conventional energy sources, for example, Hydroelectric energy: from the flow of water in a river; Solar energy: from solar radiation; Wind energy: coming from the movement of air masses, that is, from the force of the winds; Wave energy: from the movement of sea waves.

ENERGY TRANSITION

Energy transition is a concept that applies to structural changes in energy matrices in the long and short term. These changes stem from different historical changes, ranging from the availability of fuels to environmental needs to reduce greenhouse gas emissions.

UNSUSTAINABLE

Quality of what has no foundation or possible defence; something that cannot be maintained with the same balance conditions over time.

KEY NUMBERS: 80,0,ZERO

To avoid an average 2°C rise in Earth's surface temperature, we must keep at least 80 percent of all known fossil fuel reserves underground today (plus any new reserves to be discovered in the future). It is important that greenhouse gas emissions are reduced as close to zero as possible, while emissions present in the atmosphere are reabsorbed, for example, by oceans and forests.

CLIMATE CRISIS SCIENCE

It is the science that studies Earth's climate change.

MARINE POLLUTION

Marine pollution occurs as a result of litter and waste spilling into the sea, which are very negative for the ecosystem.

FOSSIL FUELS

Coal (mainly mineral) was once one of the most important and polluting sources of energy in the world, especially with the advent of the industrial revolution. However, its use has greatly decreased where it has been possible to replace it with petroleum derivatives. Both are, however, energies that release greenhouse gases, and are therefore quite polluting.

POLLUTING ENERGY

Polluting or dirty energies are those that, during their production, distribution and consumption process, have high environmental costs and cause considerable environmental damage. These energies can have devastating consequences for human and animal life and for the planet's climate balance.

ENVIRONMENTAL IMPACTS

Environmental impacts are the consequences of human activities on nature. Mining and agriculture, for example, are economic activities that alter the environment. Environmental impacts affect the planet in many ways and can cause irreparable damage.

PUBLIC OWNERSHIP OF ENERGY

The average sea level has risen by about 23 centimetres since 1880, with about 7.5 of those centimetres having risen in the last 25 years. Every year, the sea rises, on average, another 3.2 millimetres.

CLIMATE CHAOS

The increase in carbon dioxide recorded in the atmosphere since the beginning of world industrialization in 1750 has been directly linked to human activity. According to the UN, among the consequences of this, is the loss of agricultural production capacity, caused by the droughts that affect some around the world, while in other regions the effects that have already intensified are heavy rains and floods.

CLIMATE ACTIVISM

Climate activism is the necessary step we must take to reverse the current global warming situation. To do this, we must reduce greenhouse gas emissions over the next few decades and keep global warming below 2°C.

ADAPTATION

Adapting to climate change involves making adjustments in ecological, social and economic systems, processes and practices to adapt both to the actual effects of climate change and possible future damage. In addition, it is also about making the most of all potential beneficial opportunities associated with climate change.

MITIGATION

The mitigation of climate change refers to all actions or efforts undertaken to reduce levels of greenhouse gas emissions into the atmosphere in order to prevent further warming of the planet. Mitigation can consist of reducing the sources of these gases, for example, with the use of new technologies and renewable energies, or in valuing "sinks" such as forests and soils that store these gases.

BIO-PRODUCTIVITY

Bio-productivity is the organic matter produced by a species, population or ecosystem in a given period of time.

GREENHOUSE GASES

They are gaseous substances naturally present in the atmosphere and that absorb part of the infrared radiation emitted by the sun and reflected by the Earth's surface.

DIRECT ACTION

Direct action is a form of activism, which uses more immediate methods to bring about desirable changes or stop undesirable practices in society, such as electing political representatives who promise solutions at a later date, or resorting to the legal system.

ENVIRONMENTAL COSTS

Environmental costs are the costs of the means used in their entirety, in various activities developed with the purpose of controlling, preserving and recovering the environment.

EXTRACTIVISM

Activity by which natural products of animal, vegetable or mineral origin are extracted for commercial or industrial purposes.

THINK GLOBAL, ACT LOCAL

We must be attentive and aware of what happens in the world, but our action can and must be amongst ourselves, in our home.

CLIMATE JUSTICE

Climate justice is the concept of equality, human rights, collective rights and historical responsibilities for climate change. Climate justice actions can include the growing global number of legal actions on climate change issues.

WATER CRISIS

The water crisis is also the lack of fresh water resources compared to the pattern of use of current societies. The lack of water is caused by droughts, lack of rain or irregular rainfall, as well as pollution and excess consumption in various activities.

CLIMATE VULNERABILITY

Climate vulnerability is the predisposition to be adversely affected by climate change. It can apply to human beings, but also to natural systems.

EXTREME PRECIPITATION

Extreme precipitation is intense rainfall that leads to flooding and a lot of damage, caused by changes in environmental conditions.

ENERGY DEMOCRACY

Energy democracy is a concept developed within the environmental justice movement that seeks to foster social justice, empower communities, redistribute political and economic power, and reinforce their role in ownership, control and management of the energy sector.



CLIMATE EMERGENCY

Climate urgency recognises the extreme threat posed by global warming and develops measures to reduce carbon emissions to zero within a given timeframe and exert political pressure on governments to become aware of the current environmental situation.

FLOODING

Intense bouts of flooding are set to become more frequent following a pattern of severe flooding over the past 10 years, linked to an increase in extreme weather events as the climate changes.

Weather Idioms
(English – Portuguese)


2. English



• It's raining cats and dogs.

Portuguese



• Está a chover a potes.



1. English



• To make a tempest in a teapot

Portuguese



• Fazer uma tempestade num copo de água



5. English



• To have your head in the clouds

Portuguese



• Ter a cabeça nas nuvens



3. English



• Come rain or shine

Portuguese



• Faça chuva ou faça sol



6. English



• To break the ice

Portuguese



• Quebrar o gelo



4. English



• To wait for a raindrop in the drought

Portuguese



• À espera de um milagre



Thank you!



5.2 ROC True stories:

Students in Portugal imagined they were journalists and wrote articles based on true stories that have already happened:



Extreme Weather Phenomena and their consequences in Portugal



In Portugal there have already been several extreme phenomena as a result of climate change.

One of them was the forest fire of Pedrógão Grande that occurred on June 17, 2017, which had the most impact in the district of Leiria. This dangerous fire caused 64 deaths and more than 200 injured people and, in terms of material damage, these were gigantic: there was the destruction of more than 500 houses and 81% of forest area was destroyed.

Another phenomenon that occurred on 13th/14th September, 2018, was hurricane "Leslie" that caused widespread damage to homes, infrastructures, telecommunications, light and water supply, and destroyed agricultural structures and crops. In my house, the tiles flew due to strong winds; we had no power or water for some days; trees fell preventing the movement of cars in some areas.

In this region, there have also been floods that caused significant damage to the local inhabitants' homes, prevented them from circulating on the streets and by train, and put some crops at risk. In my house, we were basically isolated, living on a temporary island.

We can conclude that extreme phenomena lead to disturbances in ecosystems and in our daily routines.

Inês S, 8A



Hurricane Leslie



In October 2018, I was outside, when it started to rain a lot. As I was near home, I ran inside. After a few minutes, I had no electricity. Later, the light eventually came back on and right after that I turned on the TV and saw that Hurricane Leslie was on us – and how! For the rest of the night, the light went down four more times, and there was a lot of wind and rain.

Next morning, there was still no electricity. When I went down the stairs of my building, which is close to the park, the entrance of the building was full of water, so I couldn't get out to work. Like so many others around the country, but especially in and around Soure, I called my employers to let them know that I wouldn't be able to go to work that day.

I spent the day without electricity and that night I had to have dinner with a candle and the flashlight of my cell phone.

The following day, I went downstairs to see if I could work that day. Despite the water having gone down, I still couldn't leave the building. Later I was told that the fire department would come to pick us up by boat and that was it.

I spent the rest of the week without electricity, having to use candles when it got dark. We were advised that we would have to hire a company to clean the mud at the entrance of the building.

By the end of that week, we already had the entrance clean and electricity.

Laura A, Jean C, Igor C, Lucas S, 8E



Climate Change



Climate change occurs in terms of temperature. Such changes can occur quickly, over decades, or slowly, over millions of years. Proof of this is the transition from the ice age to the current climate state of the planet.

There are many reasons that justify the climate changes we are currently witnessing. They can be caused by processes internal to the Earth-atmosphere system, by external natural forces (such as solar and terrestrial orbital variation) and as a result of human activity.

Our country is no exception. Over the last few years it has been buffeted by extreme meteorological phenomena.

An example of this was storm Leslie, which hit a significant part of the central region about 4 years ago, with the district of Coimbra being the most affected.

It entered land in the Figueira da Foz area, further north than expected, where wind gusts at 176 km/h were recorded, the highest value in Portugal. Leslie affected telecommunications infrastructures and light supply, private homes, campsites, collective associations and social sector institutions, nurseries and agricultural fields, among others.

What is within our power to fight against climate change? Avoiding water waste and excessive consumption of meat, avoiding the use of plastic and disposable products, saving electricity, among other gestures.

In practice, unprecedented changes are needed in all aspects of society to deal with climate change. We will all have to make an effort.



Source: <https://www.dn.pt/pais/foi-ha-dois-anos-tempestade-leslie-provocou-prejuizos-de-120-milhoes-de-euros-12907011.html>

Duarte G, 8A



CLIMATE CHANGE in Soure, Portugal



According to [NASA](#), the definition of Climate Change is *a broad range of global phenomena created predominantly by burning fossil fuels, which add heat-trapping gases to Earth's atmosphere. These phenomena include the increased temperature trends described by global warming, but also encompass changes such as sea-level rise; ice mass loss ... and mountain glaciers ...; shifts in flower/plant blooming; and extreme weather events.*

Portugal has not been immune to these consequences of human action.

An example of an extreme weather event was "Leslie" that in October 2018 mainly hit the regions of Coimbra, Leiria and Viseu. This hurricane not only destroyed houses, the road and rail network, but also the electricity and water supply in those districts.

My region (Baixo Mondego - Soure) was one of the most affected. In my house, the day after the hurricane, we saw that some roof tiles had fallen as well as several branches of the tree we have in the backyard; most of the plants were destroyed. Like most people in the region, we were without electricity and water for some days, and during this time we often had to go to my sister's house to, for example, take a shower. On our way, we saw several more houses that had lost their roofs, trees that had fallen, roads that had been cut, etc. At my grandmother's house, the shed had collapsed, the poles holding it up had fallen, and the chimney had been destroyed.

More recently, in Portugal, there have been some more extreme phenomena, due to climate change, such as droughts and forest fires, which have affected mainly the center and south of the country, harming mainly farmers and their crops. During the month of December, 2022, - not even a month ago – heavy and persistent rain hit most of Lisbon and Viana do Castelo and flooded homes, shopping centers, hospitals, and roads, wreaking havoc and causing enormous damage to the population.

From the news, we are all aware that climate change is affecting the whole world, so we ALL have to do our part to help PLANET EARTH.

Clara C, 8A



Climate Change and its consequences in Soure



As a result of climate change, Portugal has suffered several extreme weather events such as floods, fires, droughts and storms.

One of the most relevant events was in February 2021 when the village of Soure was flooded by the Arunca river that joined the Anços river, which, in turn, led to the flooding of the road between Soure and other places, including Casalinhos, which made it difficult for traffic. I was able to witness these events first hand because, living in Soure, it was also difficult for me to travel to other areas of the municipality.

Another event took place in 2018, when a tropical hurricane, called "Leslie", hit mainland Portugal on October 13th. This phenomenon left hundreds of homes without electricity, destroyed cars, uprooted many trees, and caused the Mondego River and some of its tributaries to overflow, which led to flooding and the destruction of large agricultural areas.

I also suffered the negative consequences of this extreme phenomenon: my garden was completely destroyed and the path to my house was blocked by fallen trees. My building lost some roof tiles, we lived without electricity for a few days and had to burn candles for some light. There was no running water either...

Sadly, some of these phenomena are due to climate change - the consequence of the direct action of the human beings, who do not respect the preservation of their natural "habitat" and only think about their immediate comfort needs.

Ana C, 8A



Armando's Hideaway



While looking at his phone, Armando crumples a small plastic bag in his hand. He looks around, looking for a trash bin to put it in and he finds one. He walks in its direction and looks at his phone again.

When he reaches the trash bin, he presses the pedal and the lid gets up. The trash smell coming from the inside is thrown at his face, so he turns his face as a repulsion reflex of the smell.

When he looks to the side, he sees a light pole, but it was a fallen light pole. He remembers why it is fallen.

About a week ago, there was a giant hurricane in Soure, where Armando lives: Hurricane Leslie, probably the strongest storm the population of Soure has ever seen there...

Roofs were destroyed, trees, electricity posts and light poles, like this one, that were knocked down by the wind and even destroyed some buildings; people whose light went down for days and some of them still haven't recovered; the broken windows, all that catastrophe, all the injured and the ones who were not able to see the consequences that it caused.

Armando remembers being on a restaurant called "Fernando's Hideaway" when it happened. The windows were shaking loudly, starting an uproar in the crowd. The restaurant was completely full. Some louder sounds could be heard from time to time and everyone was getting worried for not knowing what could have caused the disturbance. They were all stuck there, with a dim light they didn't know how long would last.

Armando was with his parents among those people, but he couldn't take it anymore. Armando is autistic and was under a lot of pressure. All that chaos was driving him crazy, so he sneaked through all those strangers, who were still nervous about the storm out there. By then, the storm was causing more and more damage, flooding the restaurant and still shaking the windows loudly.

He, eventually, found a door that was ajar and didn't hesitate to enter the room on the other side. There he saw a few stairs that took him to a scary pitch-black room. Armando turned the lights on and realized it was a wine cellar. He closed the door and enjoyed the silence while taking deep breaths, calming him down. He sat on the floor and ended up falling asleep. The only thing he remembers after that is waking up in his house, with no light, the next day.

Now, in the present, he looks at the trash bin, looks around, sees the recycling bins, thinks about that night, the wine cellar, the chaos, the noise, the injured, his planet and puts the plastic bag in the yellow recycle bin.

Anna T, Dinis M, Martim N, Stepan B, 8E



SAVE THE PLANET

5.3 ROC Haiku on climate change

haiku (Japanese poem) on the topic of climate change:



PORTUGAL



5.4 ROC PPTs on climate change:

PPTs on climate change: in groups, Portuguese students achieved PPTs on effects of climate changes that affect our environment, health and biodiversities:





Simple & Effective tips

How can we reduce our ecological footprint?

- Turn off the water while brushing your teeth.
- Take quick showers instead of fun showers.
- Do recycling.

How can we improve this rate even more:

- Instead of using cars try to use public transport or bicycles more.
- Use less paper.

Climate change Causes

The main cause of climate change is the greenhouse effect, due to:

- Intensive agriculture;
- Deforestation;
- Livestock activity;
- Burning of fossil fuels;
- Industry;
- Volcanoes;
- Etc...

Climate change

Earth's climate has changed radically many times since the planet's formation 4.5 billion years ago. It has oscillated between warm periods and glacial periods; these cycles always lasted tens of thousands or millions of years.

Climate change Consequences

- Rising sea levels;
- Floods;
- Storms;
- Extreme drought;
- Hurricanes.

Climate change What is it?

These are variations in weather patterns, such as:

- The temperature,
- Sea levels
- Precipitation.

Climate change How to reduce the impacts

- Avoid the use of plastic;
- Seek alternative ways to fossil fuels;
- Reduce the use of the car to move;
- Consume sustainable products;
- Decrease consumption of meat and milk;
- Recycle;

Thank you!



Class 8A Ecological Footprint

Biggest ecological footprint of all 8A students:

It would take 6.2 Earths if everyone were like this student and by the 1st of March our resources would run out.



Smallest ecological footprint of all 8A students:

Not ideal, but so much better than 6.2! It would a great step forward if more students were at least like this student and family: 2.8 Earths...



Ecological Footprint in Class 8A

The previous results show that our country is not taking sustainability seriously and our own class results are an example of that!

As you will see, some are not careful at all while others seem to be deeply concerned and make a daily effort to lead a sustainable life with their families.

And what is Earth Overshoot Day?

Earth Overshoot Day marks the date when humanity's demand for ecological resources and services in a given year exceeds what Earth can regenerate in that year. It is hosted and calculated by the [Global Footprint Network](https://www.footprintcalculator.org/).

A Country's Overshoot Day is the date on which Earth Overshoot Day would fall if all of humanity consumed like the people in that country.

Let's check Portugal, for 2023!

Some solutions to reduce our ecological footprint



- **Recycle | Reduce | Reuse** more;
- **Use window seals** for improved efficiency - retain heat and lower energy costs;
- **Eat less meat** - it can help **reduce pressure on forests and land used to grow animal feed**, which in turn protects biodiversity, the earth's ecosystems, and people living in poverty who are bearing the brunt of climate change;

What is the Ecological Footprint?

- It is a sustainability indicator promoted by the Global Footprint Network at <https://www.footprintcalculator.org/home/en/>;
- It is a method of gauging humans' dependence on natural resources by calculating how much of the environment is needed to sustain a particular lifestyle. In other words, it measures the demand versus the supply of nature.
- The ecological footprint is one way of measuring sustainability, which refers to the ability of a population to support itself in the present without compromising that ability for the future.

- **Invest in an electric car and travel more by bike or walk** to help reduce CO₂ emissions;
- **Avoid unnecessary travel by plane**;
- **Use reusable bags** instead of plastic bags;
- **Instead of buying fast fashion, buy second-hand** - the fashion industry is responsible for 10% of CO₂ emissions on the planet;
- **Opt for local and seasonal products** - they are healthier and more ecological;
- **Take faster showers and turn the tap off when brushing teeth** to save water;
- **Buy a reusable bottle** instead of plastic ones;
- ...

Our goal? >>>

#MoveTheDate

"The past does not necessarily determine our future. Our current choices do. Through wise, forward-looking decisions, we can turn around natural resource consumption trends while improving the quality of life for all people. While our planet is finite, human possibilities are not. The transformation to a sustainable, carbon-neutral world will succeed if we apply humanity's greatest strengths: foresight, innovation, and care for each other. The good news is that this transformation is not only technologically possible, it is also economically beneficial and our best chance for a prosperous future."



Thank you!

Ana C. & Inês S.



5.5 ROC Campaigns: "Be a volunteer!", "Slash Trash"

Portuguese students cooperated with organisations in their area, helping them, sharing information with their colleagues:

November Edition



Soure, Portugal

BREAKING NEWS

Be a volunteer! Campaign



Join us!

This November, Soure students had the privilege of attending a session led by activist Joka on behalf of "Don't Litter" movement on the theme "Recycling consciences".

The goal was to raise awareness among these young people about the current situation of our planet as well as about their environmental attitudes in order to reduce behaviors that are harmful to their health and the planet.

Finally, being minors, some of our students agreed to become volunteers for a similar organisation, but in Soure.

SUSTAINABILITY

CHANGE YOUR ATTITUDE, CHANGE THE WORLD!

The United Nations has declared 2020-2030 the "Decade of Action" to achieve the SDGs and calls for greater ambition and a sense of urgency to accelerate the transition.

To live more sustainably, we must REDUCE the WASTE we produce

Use compost at home. Don't throw away but reuse your organic waste to make compost for your garden or to create other original dishes/food.

To live more sustainably, we must REDUCE the WASTE we produce

We should use recycled containers to store food and also use paper bags rather than plastic.

To live more sustainably, we must REDUCE the WASTE we produce

Make changes or environmentally friendly options and reuse whenever possible, sometimes exchanging napkins and paper tissues for reusable options.

Use reusable cloth napkins and tissues.

To live more sustainably, we must REDUCE the WASTE we produce

- Make a shopping list;
- Choose to consume homemade products (cakes, biscuits, jams, sauces, yoghurts, cheese) instead of buying them;
- Grow herbs at home for seasoning and making tea/infusions.

Portugal is the 9th country in the UE with the highest waste production.

Tour UWMS
Urban Waste Management System

Each inhabitant of the SGRU ERSUC intervention area, by the end of May 2023, had already recycled 16.5 kg packaging waste, being below the country's average, which is 17.5 kg/inhabitant. Keep contributing!

To live more sustainably, we must REDUCE the WASTE we produce

Promote or participate in environmental initiatives, such as plugging actions to collect trash or cigarette butts from the ground, "adopt" a street or location, etc...

<https://www.plasticbusters.org/get-involved>

To live more sustainably we must REDUCE the WASTE we produce

Offer original gifts wrapped in magazine or newspaper paper

Use toothbrushes where you only change the brush head

Use butter wrapped in paper and a reusable butter dish

The products in the image above are less sustainable than those in the image below. Why?

WE NEED LESS OF THIS

AND MORE OF THIS



To live more sustainably, we need to REDUCE the WASTE we produce

Search, read labels, and always try to act in a sustainable way.



Check whether detergents are harmful to the environment, look for information in reliable books or websites.

To live more sustainably we must REDUCE the WASTE we produce

Choose products with indications that they respect sustainability, always paying attention to packaging labels.



<https://www.accept.pt/seis-e-logotipos-na-industria-alimentar/>

Other options more friendly to the environmentally

Research, read labels, try to always be informed about the most sustainable alternatives,



Solid shampoos and soaps emit fewer greenhouse gases as they are easier to transport and do not contain water in their composition



When consuming chocolate, we must pay attention to whether it was produced sustainably (UTZ) and properly separate the paper from the aluminum

To live more sustainably, we must REDUCE the WASTE we produce



Repair clothes or objects that can still be used

Other environmentally friendly options

SAVE WATER, ENERGY AND ALL NATURAL RESOURCES



Save cold water from the beginning of your shower



Cool down the house in a natural way

| | Incandescent | Fluorescent | LED |
|--------------|--------------|---------------|---------------|
| Power | 60 watts | 15-20 watts | 8-12 watts |
| Expenditure | 1000 hours | 10000 hours | 25000 hours |
| Duration | 1000 hours | 10000 hours | 25000 hours |
| Saving | 100% | 75% | 80% |
| CO2 emission | 100% | 40% reduction | 80% reduction |

Save electricity by choosing ecological light bulbs and turn off lights when not needed



More environmentally friendly options:

Reuse clothes that belonged to your parents/ brothers/ siblings/ friends or even buy in 2nd hand clothing stores or websites, for example Vinted-



https://pegadaverde.pt/pt_pt/blog/post/sites-de-roupa-em-segunda-mao

Seek information/keep informed:

On the internet / social networks / magazines there is a lot of information that we can use.
 If you have any doubts, you should contact someone more experienced or cross-check information with other recognised sites.
In Portugal:
 Associação ZERO: <https://zero.org/>
 QUERCUS: <https://quercus.pt/>
International: ONU, OCDE, WWF, Greenpeace, etc...



THE 5 R's
 Environmental responsibility and sustainable development



<https://blogdamimis.com.br/2015/07/02/10-atitudes-sustentaveis-para-um-mundo-melhor/>

And how about being an influencer??

Being an influencer is someone who is able to stimulate the behaviour and opinion of various people through their actions, who may or may not publish these actions on social networks or websites. How can we influence our classmates at school to change their behaviour?
 Have a look at these Portuguese influencers who have just started instagram accounts
https://www.instagram.com/sustentabil_arias/
<https://www.instagram.com/23sustentavel/>
 and this website <https://nunoqummundomelhor.blogspot.com/>
 What about YOU? Are YOU up to the challenge?



PORTUGAL



5.6 ROC "Actors explore climate change"

workshop-students wrote scripts, directed and acted in plays on climate change:

<https://youtu.be/TK9CNmLH2X0>

<https://youtu.be/UOlxYFkKh-A>



5.7 ROC Green Shopping Guide

containing lists/ideas/short articles written by ROC students, with things to buy, green thinking ideas-each participant team had their own idea for this guide structure:

List of sustainable materials



List of products that we should buy:

- | | | | |
|--------------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------|---------------------------------------------------------------------------------------|
| 1. Ecobags |  | 14. Cloth diapers |  |
| 2. Local and seasonal food | | 15. Reusable makeup remover pads | |
| 3. Second-hand clothing | | 16. Wooden toothbrushes | |
| 4. Paper cups, plates, cutlery | | 17. Bowls, vases, etc. made of clay or glass | |
| 5. Wooden clothes pegs | | 18. Cork or bamboo ballpoint pens | |
| 6. Wooden hair brushes | | 19. Wood sharpeners | |
| 7. Reusable bottles (metal and glass) | | 20. Wooden rulers | |
| 8. Metal or paper straws | | 21. Reusable bibs | |
| 9. Sustainable toys | | 22. Recycled paper | |
| 10. Coffee stirrers/picks in Madeira | | 23. Rechargeable batteries |  |
| 11. Glass covers | | | |
| 12. Toilet paper made from organic fabrics | | | |
| 13. Vegetable sponges | | | |



Green Shopping Guide



There are many materials that are part of our daily lives, but many of these objects are disposable or will need to be replaced after a while.

When we go shopping, we should take care to switch to sustainable materials.



Here's a sustainable swap guide:

- Paper napkins for cloth napkins;
- Plastic Bottles for Reusable Bottles;
- Disposable make-up remover discs for reusable make-up remover discs;
- Disposable Plastic Bags for Reusable Bags;
- Toothpaste in a Plastic Tube for Natural and Organic Toothpaste in a Glass Bottle;
- Plastic Toothbrush for Bamboo Toothbrush;
- Plastic Cotton Swabs for Bamboo Cotton Swabs or Metal Ear Cleaners;
- Disposable dishwashing sponge for reusable sponge.



Martim S.



SUMMARY



- It is important to consider the products we place in our homes.
- Making your shopping habits "greener" does not have to be a challenge but a choice.

Despite more and more talks about sustainability and the consequences that our attitudes as consumers have on our planet, we are still far from completely changing our habits.



THE 10RS OF SUSTAINABILITY

- 01 Refuse** products that harm nature.
- 02 Rethink** and reflect on daily attitudes.
- 03 Reduce** the use of plastic bags, reduce impulse buying of products, reduce water and gas consumption.
- 04 Reuse** what would otherwise be discarded, giving it another destination.
- 05 Repair** what needs to be repaired.
- 06 Recycle** when there is no longer any reuse or repair.
- 07 Return** to nature what came from it.
- 08 Respect** life, living beings, people, your work or school, the environment and nature.
- 09 Take responsibility** for your actions and the impact they cause, whether good or bad.
- 10 Repeat** all into that can help make the world a better and more sustainable place.

IN THE MARKET:

Bring reusable bags from home for your purchases.

Prefer bio or organic products because in addition to being beneficial to health, no pesticides and chemical fertilizers are used.

Prefer larger packages to individual doses.

STEP 1 → STEP 2 → STEP 3

- 01** Do not buy clothing of animal origin. Ex: Fur coats, sheep skins...
- 02** When a glass of clothing no longer fits you, donate it or repair it to avoid new items.
- 03** Buy sustainable products clothing. Ex: "Organic", "100%", "Eco".
- 04** Buy second-hand clothes. Ex: "Vetro city LINDA", "A Quinta Fada da Lua", "As de Viteiras", "Fada Alana 100%", "Sua de Mãe", "Monsieur".
- 05** Do not buy from brands that use only virtual energy.

HOME APPLIANCES



IN THE MARKET:

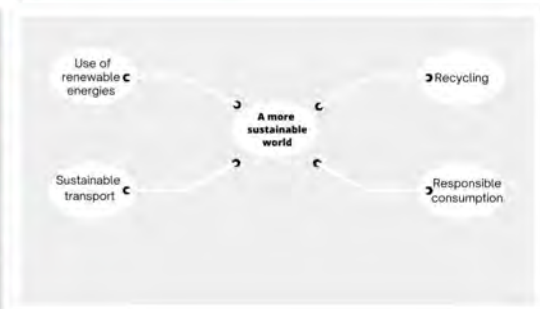
Buy seasonal fruit and vegetables.

Make a list before leaving from home to avoid buying unnecessary products. Don't go to the supermarket when hungry, as you will end up buying more than you need.

Do not put fruit and vegetables in plastic bags but in a small cloth bag. Do the same in the bakery; put your bread in a cloth bag instead of using plastic bags.

STEP 4 → STEP 5 → STEP 6

CLOTHES

Sustainable and unsustainable home appliances

| SUSTAINABLE | UNSUSTAINABLE |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> Energy saving; Water saving; Lower environmental impact; Incentives and greater number of purchases; Reduction in greenhouse gas emissions. | <ul style="list-style-type: none"> Excessive energy consumption; Waste of natural resources; Environmental impact; Improper disposal; Greenhouse gas emissions. |

WEBGRAPHY:

<https://www.audiotronics.com/2014/05/na-10-10-de-mercado-ecologico/>

<https://mondofarm.pt/dicas-para-comprar-de-forma-consciente/>




<https://redesca.pt/conce-sustentavel-para-afazeres-ecologicos-de-forma-veloz-e-ecologica/>






SUSTAINABLE SHOPPING LIST

Matilde N
Sara R

- 
- 
- Prefer to use reusable bags instead of plastic or paper bags;
 - Consume more seasonal and local products;
 - Buy food in bulk instead of being packaged;
 - Choose to have a digital invoice to save more paper;
 - Prefer bamboo toothbrushes and bamboo or steel straws so as not to waste so much plastic;
 - Whenever possible, buy low consumption LED lamps;
 - Use reusable water bottles;
 - Purchase reusable menstrual hygiene products.
- 

5.8 ROC Diary

Portuguese students wrote down all things they did to help the environment for a few days or even a month:



Content

- 01 How can we save our planet
- 02 Ways to help saving our planet
- 03 What a Ranger of Change does in a month to help the planet
- 04 A regular day of a Ranger of Change

Novembro 2023

days 26-27: Today I went to the beach and I saw a lot of trash. I took it out and I recycled it.

day 28: Today I took out the trash after making the division and recycling.

day 29: Today I recycled as usual.

day 30: Today I recycled.

November 2023

day 08: Today I went to the beach and I saw a lot of trash. I took it out and I recycled it.

day 09: Today I went to the beach and I saw a lot of trash. I took it out and I recycled it.

day 10: Today I went to the beach and I saw a lot of trash. I took it out and I recycled it.

day 11: Today I went to the beach and I saw a lot of trash. I took it out and I recycled it.

November 2023

day 01: Today I went to the beach and I saw a lot of trash. I took it out and I recycled it.

day 02: Today I recycled and also bought LED lights for my room and used fewer lights at home.

days 03-05: Today I went to the beach and I saw a lot of trash. I took it out and I recycled it.

days 06-07: I recycled.

Novembro 2023

day 18: Today I recycled.

day 19: Today I recycled again.

day 20: Today I recycled.

day 25: Today I recycled.

Novembro 2023

day 14: Today I brought the garbage outside and the recycling.

day 15: Today I came back from school and after doing my homework I recycled.

day 16: Today I recycled.

day 17: Today I recycled and went to a park and I saw a lot of trash. I took it out and I recycled it.






ROC diary

Rodrigo Bernardino 8A





ROC diary

- November 17th: I used grass to put in my chicken coop and then used it as fertilizer. 
- November 18th: I saved the fireplace ashes to use as fertilizer. 
- November 19th: I separated the trash. 
- November 20th: I now use cloth napkins at all meals. 





ROC diary

- November 25th: I took the trash to the container. 
- November 26th: I separated more trash. 
- November 27th: I went to school by bus. 
- November 28th: When the cell phone was fully charged, I immediately unplugged the charger. 

ROC diary

- November 5th: I took the cardboard to the container for recycling. 
- November 6th: I have chickens so I don't have to buy eggs. 
- November 7th: When the cell phone is charged, I always unplug the charger. 
- November 8th: I reuse boxes to store other products. 



ROC diary

- November 1st: I separated the trash. 
- November 2nd: I took the trash to the container. 
- November 3rd: I stored shower water in a basin. 
- November 4th: Instead of always turning on the tap, I put the water in a glass. 

ROC diary

- November 21st: I recycled glass. 
- November 22nd: I have chickens so I don't have to buy eggs. 
- November 23rd: I stored shower water in a bucket. 
- November 24th: Instead of always turning on the tap, I put the water in a glass. 

ROC diary

- November 29th: I took the cardboard to the trash. 
- November 30th: When we leave a room in the house, we immediately turn off the light. 

ROC diary

- November 9th: When I left a room in the house, I immediately turned off the light. 
- November 10th: I went to school by bus. 
- November 11th: I recycled glass. 
- November 12th: I saved the fireplace ashes to use as fertilizer. 

ROC diary

- November 13th: I started using cloth napkins. 
- November 14th: I used water from the dryer to water the plants. 
- November 15th: In my fireplace, I used pine cones instead of firelighters. 
- November 16th: I used materials I had to make another one with more use. 

Thank you for your attention !!!!



MARTINHO ÁRIAS

ROC diary
What good have I done to help the environment?


MARTINO ARIAS

Salvador Foja

5th November. 
I saved eggshells for fertilising vegetables and flowers.

6th November. 
I saved water.

3rd November. 
I didn't use plastic bags to go shopping.

4th November. 
My compost.

9th November. 
This image shows that we should buy appliances with an A+ energy rating.

10th November. 
Reuse glass jars.

15th November 
I separated medicines to take to the local pharmacy.

16th November. 
Just bought seasonal fruits.

1st November. 
I saved bath water.

2nd November. 
Kitchen water used to wash the vegetables was used to water the garden.

7th November. 
This picture shows my garbage separation.

8th November. 
This image shows LED slats which consume less power.

11th November. 
I turned off appliances on stand-by.

12th November. 
I turned off the water while I was brushing my teeth.

13th November. 
I used my own water bottle – a reusable one!

14th November. 
Do not use plastic straws!

25th November.  My parents started receiving digital invoices.

26th November.  I reused clothes from my older brother.


17th November.  Avoid the use of air conditioning.

18th November.  I reused peels and vegetables to feed domestic animals.


23rd November.  I reduced wrapping paper.

24th November.  I rode bike to and from school.

29th November  I donated toys I no longer used.

30th November.  I went to the market with my mom to buy local products.

19th November.  Turn off the lights when you're not in the rooms.

20th November.  Do not pour the used oil down the drain. I collected some to take to school for the correct container.

27th November.  I made art by recycling materials.

28th November.  I participated in a Book Exchange.

21st November.  Use the dishwasher responsibly – only when it's full.

22nd November.  We reduced meat consumption considerably and chose fish and vegetables.

Thank you



5.9 ROC Green Corner

Green Corner of Climate change at the Portuguese school, in each classroom, containing R advice: RETHINK choices, REFUSE single use, REDUCE consumption, REUSE everything, REPAIR, REPURPOSE, RECYCLE- students in each class organised it. Living in a throwaway society: at Martinho Árias School, in Soure / Portugal, students created art for the planet, highlighting the plastic pandemic through the use of waste. Art has long been used as a powerful creative tool for political and social activism- from Picasso's Guernica to Banksy. With plastic pollution and climate change at the forefront of everybody's minds, teachers and students started to look at our waste in a new way, creating powerful artworks that serve as a stark reminder of the impact of our waste on the planet and its inhabitants, and inspired us to rethink our own consumption habits and their unforeseen consequences. With plastic recovered from our clean-up actions, from our homes, children reused discarded materials creatively and built robots. Older students created fish from plastic waste while our vocational students answered the creative call "School environment without waste" and built a huge (Ecological) Stork inspired by the local fauna.

This project aimed to raise awareness about reducing plastic use, it encouraged creativity and critical thinking among the educational community. The Ecological Stork represents a practical solution for collecting and managing plastic waste at school, it incorporates elements of local biodiversity, connecting students with the environment around them. The Ecological Stork prototype was developed based on ecological and sustainability principles, trying to minimize the environmental impact caused by excessive plastic use. The fish and the stork serve as educational tool, encouraging school community to reflect on their consumption habits and adopt more responsible practices in what concerns the use of plastic. The Ecological Stork represents a place to dispose plastic waste, a symbol of school community's commitment to preserving the environment and promoting sustainability.

REDUCE the use of plastic bottles.

REDUCE food waste.

Choose renewable energy, such as solar panels.

REDUCE the use of chemical products in cleaning.

Take your own bags when shopping.

REDUCE the use of cutlery and other disposable utensils.

REDUCE online shopping.

REDUCE energy consumption.

MARTINHO ÁRIAS

Rita Gonçalves 8C

The Sustainability R's

Every single deed is needed to save planet Earth.

But, for that to happen, we all need to help.



PORTUGAL



How to avoid waste

Waste refers to the excessive use of resources, resulting in an unnecessary loss. This is when something valuable is discarded or not used properly, leading to a lack of use or benefit.

Reuse water



Use cold & clean bath water to water your plants

Compost



Give your leftovers to your farm animals

Recycle

lids



Paper

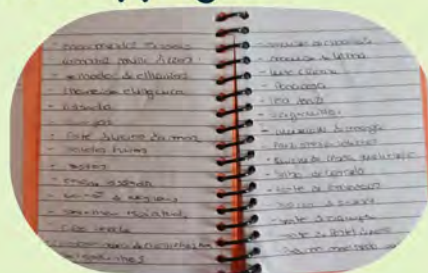


Glass



Plastic

Make a shopping list



Repair broken objects



Reuse



Reuse jars and tins to put jam

Buy second-hand

- clothes;
- home appliances;
- bags;
- toys;
- covers.

Moderate consumption



Use natural light

webgraphy: <https://chat.openai.com/c/14ea91ce-dc92-4f77-b55f-24c15a3ef81e>



PORTUGAL



Ecological Stork



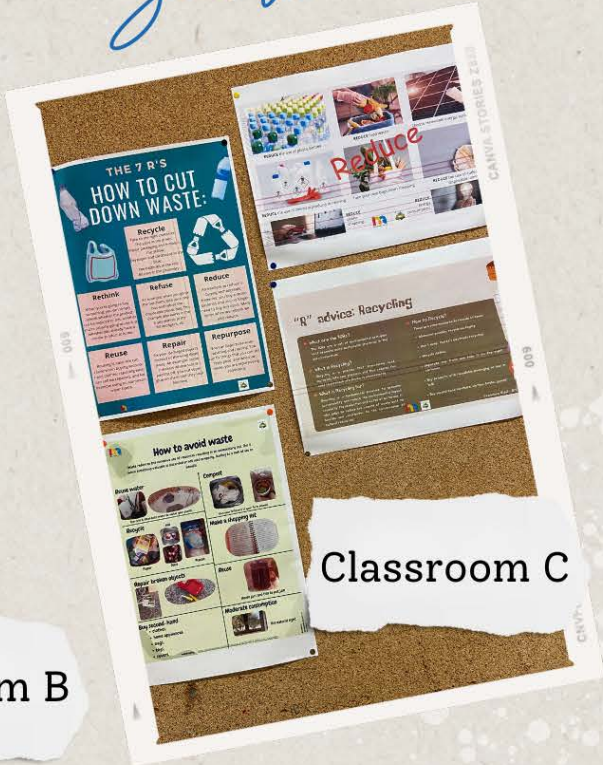
Climate Change Corner

Source

Classroom A



Classroom C



Classroom B



Classroom D



School Library



PORTUGAL



CHAPTER 6

ERASMUS RANGERS OF CHANGE IN LITHUANIA



15th-19th April 2024

Work package n°5 -Art explores climate change

Mobility at Vilkaviskio , Lithuania

158 participants

Our Erasmus+ Project "Rangers Of Change has continued its 5th mobility of Work Package No 5-"Art explores climate change"

Lithuanian students welcome their colleagues from partner schools in Greece, Portugal, Spain and Romania.

RANGERS OF CHANGE IN LITHUANIA

DAY 1 - 15th April 2024

On Monday, 15th April 2024 teachers & students from Greece, Spain, Portugal and Romania were welcome at Vilkaviskio r. Graziskiu gimnazija, Lithuania and worked together to integrate education for sustainable development in school curriculum, linking themes of recycling, climate change to art, economy, society, culture, education, heritage, health, social inclusion.

ROC Students attended welcoming ceremony for Work Package Action 5: "Art explores climate change" at Vilkaviskio r. Graziskiu gimnazija, Lithuania.

In international groups, participant students created climate change drawings and paintings, showing the beauty and fragility of Earth.

Their works proved that art is a reliable and efficient ambassador for climate action and recycling education; art has a visual impact, it is a universal language, it boosts students' creativity.

Working on project issues, teachers and students presented meeting objectives and timeline.

Getting to know each other, they did ice-breaking activities, developing their teamwork, communication, cooperation, foreign language competences.

Combining art and recycling, participants worked and discussed on why/ how to raise awareness about climate change. Exhibitions of their drawings and paintings, showing the beauty and fragility of Earth, were shown to parents, stakeholders and local community members. Initial evaluation assessed expectations, fears and personal input.

Freeze Green Dance, done by participants, integrated the beauty and fragility of Earth into the movements of dance, as a way of expressing art (https://fb.watch/swtriyHK_X/)

Exploring Vistytis Regional park, participants did plogging activities and attended a seminar on the importance of all parts of nature, protected areas; specialists told them about the threats and dangers our planet is facing these days.

Art tackles plastic pollution in our rivers/lakes/oceans/seas- organisers engaged participants and local community in environmental art making. Working in and exploring Paezeriai Manor, guest students and teachers were introduced to Lithuanian national instruments (<https://fb.watch/swtMMHZkCI/>)

Exploring the natural beauty of the old manor with its park and nearby lake and its ecosystem. participants initiated "Hug and talk to trees" campaign.

DAY 2 - 16th April 2024

Disseminating ROC project to the wider community of Vilkaviskis region.

Workshop on Science & Media activities; Creativity stimulating activities in Steam Centre (Marijampole)

Exploring climate change, ICT, environmental issues, science and creativity, students and teachers disseminated ROC project results during Mayor's reception (Vilkaviskis Municipality).

Presenting the project to the wider community of the region, partner students found out about most worrying issues of the people living and working in Vilkauskis region.

Activities in Kardokai Nature School included a Workshop on art and recyclable plastic. Following Alejandro Duran's initiative, our project participants engaged communities in environmental art making, producing community-based art works; they created works of art using small plastic objects, recovered from beaches, forests.

DAY 3 - 17th April 2024

Workshop in Meteliai Regional Park.

Studying natural surroundings in Meteliai Observation Tower, participants experienced birdwatching, sightseeing in the forest (cognitive path through blooming leafy forest, swamp). Students and teachers attended a seminar on the nature of the Regional Park. During the workshop, they got to know the flora and fauna of the area, improving their teamwork skills. Participants from the partner schools worked together on ways to achieve the project's objectives through learning activities:

- discussing project problems
- sharing the achieved results
- identifying failures
- risks
- risk causes and finding

solutions, defining responsibilities, preparing the impact measurement plan.

Exploring Marijampole's natural sights, participants created works of art in Marijampole: Malonny. The relationship between the artwork and the city of Marijampole was to paint the artists' vision onto walls and then to create a work of social art that interacts with the daily lives of the city's residents and sparks both joy and discussion.

Working on project goals face to face; discussing all the project issues, sharing responsibilities, participants discussed about how art and culture become a universal language that people may use to communicate with each other. Art speaks out in an especially loud and clear voice in Marijampolė. The fact that the organizers managed to create ever more impressive performances and gifted the city with their artwork, their positive emotions, their unique and original ideas, will continue to influence Marijampole city for years to come.

DAY 4 - 18th April 2024

Working on environmental issues; strengthening European dimension.

Direct observation, data collection, dissemination of ROC project results were done by partner students. Exploring Vilnius, the capital of Lithuania, students and teachers discovered its main points of interest: St Ann's Church, Gediminas Avenue, Uzupis district, working on quizzes about historical, cultural landmarks, exploring natural parks of Vilnius and Trakai, the old capital of Lithuania. During the workshop nearby Trakai Castle and church, participants discussed about the impact of weather changes globally and on European countries.

DAY 5 - 19th April 2024

Workshop on science and media, creativity stimulating activities in Steam Centre.

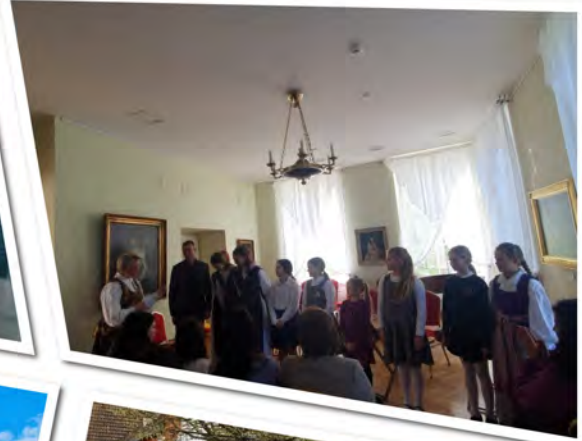
Participants improved their ICT skills cooperating on environmental issues, science and creativity. Brain-battle on topics of science, improving teamwork skills; measuring impact; awareness about climate change in the family and group of friends of participants; they analyzed impact of climate change on extreme weather; socializing activities; informing other colleagues about the impact of human activity on climate change; correctly explaining to younger peers, families, and the local community that climate change results from a combination of natural and human influenced factors that together produce specific conditions for disasters.

ROC Certificates award and learning outcomes at Vilkaviskio r. Graziskiu gimnazija- We are the Green Change! Teachers' meeting on reflection and planning of the final report on all ROC Working Packages.



RANGERS OF CHANGE IN LITHUANIA DAY 1

15th April 2024 - GALLERY



LITHUANIA

RANGERS OF CHANGE IN LITHUANIA DAY 2

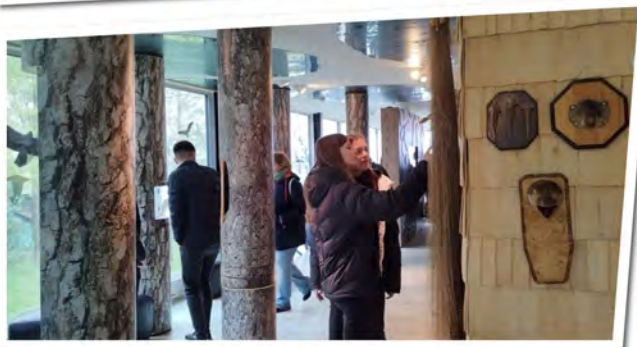
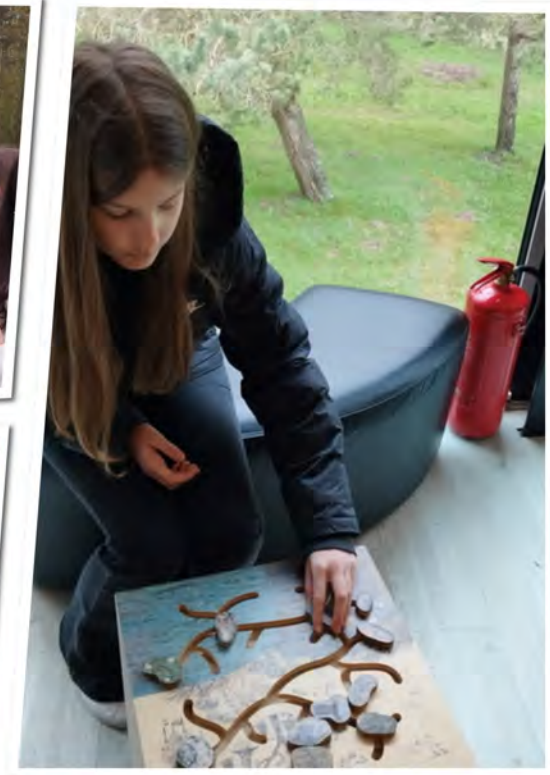
16th April 2024 - GALLERY



LITHUANIA

RANGERS OF CHANGE IN LITHUANIA DAY 3

17th April 2024 - GALLERY



LITHUANIA

RANGERS OF CHANGE IN LITHUANIA DAY 4

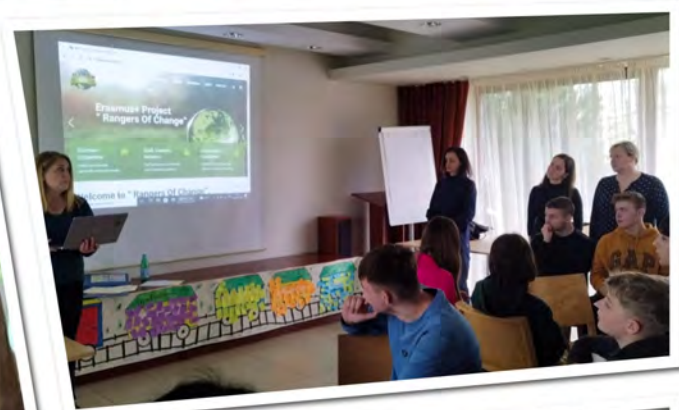
-18th April 2024 - GALLERY



LITHUANIA

RANGERS OF CHANGE IN LITHUANIA DAY 5

-19th April 2024 - GALLERY



LITHUANIA

6.1 ROC Mini-dictionary:

(in English and the languages of each partner school) of greeting words: Lithuanian students, coordinated by their teachers, wrote ROC Mini-dictionary.

| | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p> Hello! Olá Labas! Bună ziua! Γεια (Gh'ya)! ¡Hola! </p>   |
| <p> Good afternoon! Boa tarde! Laba diena! Bună ziua! Καλησπέρα (Kalispera)! ¡Buenas tardes! </p>   | <p> Good night! Boa noite! Labanakt! Noapte bună! Καληνύκτα (Kaleenihkta)! ¡Buenas noches! </p>   |
| <p> What's your name? Qual o seu nome? Koks tavo vardas? Cum te cheamă? Πώς σε λένε (Pos se le'ne)? ¿Cómo te llamas? </p>   | <p> My name is... O meu nome é... Mano vardas... Numele meu este... Ονομάζομαι... (onomAzome)... Mi nombre es/Me llamo... </p>   |
| <p> Good morning! bom Dia! Labas rytas! Bună dimineața! Καλημέρα (Kaliméra)! ¡Buenos días! </p>   | <p> How are you? Como você está? Kaip gyveni? Ce mai faci? Πώς είστε (pos íste)? ¿Cómo estás? </p>   |

 **No**
 **Não**
 **Ne**
 **Nu**
 **Όχι (Ohi)!**
 **No**







 **Sorry!**
 **Sinto muito!**
 **Atsipraşau!**
 **Scuze!**
 **Συγγώμη (Signomi)!**
 **iLo siento!**




 **Hurry up!**
 **Se apresse !**
 **Paskubèk!**
 **Grăbiţi-vă!**
 **Βιαστείτε (Viasite)!**
 **iDate prisa!**







 **Nice to meet you!**
 **Prazer em conhecê-la.**
 **Gyvenu gerai.**
 **Încântat de cunoştinţă.**
 **Χαίρω πολύ(he'ro poli)!**
 **iEncantada/o de concerte!**



 **Yes!**
 **Sim!**
 **Taip!**
 **Da !**
 **Ναι (Νε)!**
 **iSí!**




 **I'm OK.**
 **Eu estou bem.**
 **Gyvenu gerai.**
 **Sunt bine.**
 **Πολύ καλά (Poli kala).**
 **Bien gracias.**




 **Excuse me**
 **Desculpe-me**
 **Atsipraşau**
 **Scuzaţi-mă**
 **Συγγώμη (signomi)**
 **Disculpe**



 **Please!**
 **Por favor!**
 **Praşau!**
 **Vă rog!**
 **Παρακαλώ (Parakalo)!**
 **iPor favor!**




 Portugal
 Portugal
 Portugalija
 Portugalia
 Πορτογαλία (Portogalia)
 Portugal



 How old are you?
 Quantos anos você tem?
 Kiek tau metų?
 Câți ani ai?
 Πόσο χρονών είστε (poso hrono iste)?
 ¿Cuántos años tienes?



 Romania
 Romênia
 Rumunija
 România (Roumania)
 Ρουμανία
 Rumanía



 Welcome!
 Receber!
 Sveiki atvykę!
 Bine ați venit!
 παρακαλώ (Parakalo')!
 ¡Bienvenido!



 Lithuania
 Lituânia
 Lietuva
 Lituania
 Λιθουανία (Lithuania)
 Lituania



 Thank you!
 Obrigada!
 Ačiū!
 Mulțumesc!
 Ευχαριστώ (Efharisto')!
 ¡Gracias!

thank you!



 I love you!
 Eu amo Você!
 Myliu tave!
 Te iubesc!
 Σ' αγαπώ (S'agapó')!
 ¡Te amo!



 Greece
 Grécia
 Graikija
 Grecia
 Ελλάδα (Elláda)
 Grecia




Lesson
Lição
Pamoka
Lecție
Μάθημα (mathima)
Clase




I'm thirsty.
Estou com sede.
Norui gert.
Mi-e sete.
Διψώ (DhypsO).
Tengo sed.





Friend
Amigo
Draugas
Prieten
Φίλος (filos)
Amigo





I'm hungry.
Eu estou com fo
Norui valgyti.
Mi-e foame.
Πεινάώ (PynAo).
Tengo hambre.





School
Escola
Mokykla
Școală
Σχολείο (sholi'o)
Escuela





Spain
Portugal
Portugalija
Portugalia
Πορτογαλία
España




Happy
Felizede
Laimingas
Fericit
Ευτυχισμένος (eftihismenos)
Feliz





Water
Água
Vanduo
Apă
νερό (nero)
Agua




-  **1. One**
-  **Uma**
-  **Vienas**
-  **Unu**
-  **Ena (e'na)**
-  **Uno**



-  **Sister**
-  **Irmã**
-  **Sesè**
-  **Sorã**
-  **Αδερφή (adelfi)**
-  **Hermana**



-  **2. Two**
-  **Duas**
-  **Du**
-  **Doi**
-  **Δuo (di'o)**
-  **Dos**



-  **3. Three**
-  **Três**
-  **Trys**
-  **Trei**
-  **Τρια (tri'a)**
-  **Tres**



-  **Party**
-  **Festa**
-  **Vakarëlis**
-  **Petrecere**
-  **Πάρτι (parti)**
-  **Fiesta**



-  **Mother**
-  **Mãe**
-  **Mama**
-  **Mamã**
-  **Μητέρα (mitera)**
-  **Madre**



-  **Brother**
-  **Irmão**
-  **Brolis**
-  **Frate**
-  **Αδερφός (adelfos)**
-  **Hermano**



-  **Father**
-  **Pai**
-  **Têvas**
-  **Tatã**
-  **Πατέρας (pateras)**
-  **Padre**



 **8. Eight**
 **Oito**
 **Aštuoni**
 **Opt**
 **Οκτώ** (okto')
 **Ocho**



 **9. Nine**
 **Nove**
 **Devyni**
 **Nouă**
 **Εννέα** (enne'a)
 **Nueve**



 **4. Four**
 **Quatro**
 **Keturi**
 **Patru**
 **Τέσσερα** (tessera)
 **Cuatro**



 **10. Ten**
 **Dez**
 **Dešimt**
 **Zece**
 **Δέκα** (de'ka)
 **Diez**



 **7. Seven**
 **Sete**
 **Septyni**
 **Şapte**
 **Επτά** (epa')
 **Siete**



 **5. Five**
 **Cinco**
 **Penki**
 **Cinci**
 **Πέντε** (pe'nte)
 **Cinco**



 **Good bye!**
 **Adeus!**
 **Viso (gero)!**
 **La revedere!**
 **Γειά σας** (Yiá sas)!
 **¡Adiós!**




 **6. Six**
 **Seis**
 **Šeši**
 **Şase**
 **Ἑξί** (e'ksi)
 **Seis**



 **End**
 **Fim**
 **Pabaiga**
 **Sfârşit**
 **Τέλος** (telos)
 **Fin**




6.2 ROC True stories:


Students in Lithuania imagined they were journalists and wrote articles based on extreme weather true stories that have already happened:

Extreme weather conditions in Lithuania

Work done by Dainius Seukaitis


Blizzards

- On 06.01.1982, the blizzard caused a country-wide disaster, it covered more than a third of the territory of Lithuania. The wind speed in Nida, Ukmergė, Jurbarkas reached more than 20 m/s. In Ukmergė, the blizzard continued for 30 hours 30 minutes.



Temperature records

- The lowest temperature was recorded in Utena, 1956-02-01, -42,9° C.
- The highest temperature was recorded in Zarasai, 1994-07-30, +37,5° C.



Hail records


- Hail fell in Kybartai, icicles with a diameter of 120 mm.
- The largest hailstone that fell in Alytus weighed 300 g.
- Hail fell in Taurage, icicles with a diameter of 70 mm.
- Hail the size of a hen's egg fell in Kupiškis.

Wind records

- In the suburb of Šlaulių, Ginkūnai, a tornado broke through, the wind speed was around 60-70 m/s, 2011-07-27.
- A tornado blew in the village of Medekščiai (Kėdainiai district) - wind speed 30-40 m/s, trees were uprooted, roofs were blown away, buildings were destroyed, 1978-08-18.
- Hurricane Anatolijus broke through in Nida and Klaipėda. The wind increased to 40 m/s, 1999-12-04.

Consequences of this dangerous weather

- The roads are frozen in many places, making it impossible to drive.
- Rivers flood due to heavy rainfall.
- Strong wind destroys houses and uproots trees.
- Extreme cold can be life-threatening. The same applies to high temperature.



Extreme weather in Lithuania

Gabrielė Navikaitė

Impact on health

In winters a lot of Lithuanians have fever, runny nose. It is very easy to catch a cold or even get frostbites. Because of slippery road you can get in a car accident and get hurt.

In hot summers a lot of people get sunburnt and if they spend too much time in the sun, they even can have sunstrokes.




Usual weather

- * The weather is very changeable and unstable, summers are cool and rather wet with many cloudy days.
- * Winter temperatures are usually below freezing and are very cold.




Extreme weather

- * The lowest air temperature -40.5°
- * Highest air temperature $+12.6^{\circ}\text{C}$
- * Strongest wind 40 m/s



Damage

- * Super cold weather and a lot of snow cause car accidents and bad traffic
- * Very hot weather causes drought and can destroy crops.
- * Strong winds break down trees. They can fall on houses, cars and even people.





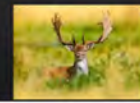
Environmental impact of agriculture

The environmental impact of agriculture varies widely based on practices employed by farmers and by the scale of practice. Farming communities that try to reduce environmental impacts through modifying their practices will adopt sustainable agriculture practices. The negative impact of agriculture is an old issue that remains a concern even as experts design innovative means to reduce destruction and enhance eco-efficiency.



How environment affect animal behavior?

Environment affects animal behavior by changing the availability of survival resources (e.g. food & shelter), as well as emotional things like proximity to human activity. Sometimes the same species of animal will behave completely differently in a forest environment compared to an urban environment.



Impact of extreme weather on the world and on country

Many of us are seeing and even experiencing the effects of climate change. But this change is not only related to extreme weather conditions such as floods, droughts or hurricanes. Slower, less noticeable changes in climate can completely change the way we live.

Climate change is also having a major impact on the world's oceans. Over the past 40 years, the oceans have absorbed more than 90 percent of additional heat generated by atmospheric changes caused by our activities.



How weather conditions affect life on the planet

The impacts of climate change on different sectors of society are interrelated. Drought can harm food production and human health. Flooding can lead to disease spread and damages to ecosystems and infrastructure. Human health issues can increase mortality, impact food availability, and limit worker productivity. Climate change impacts are seen throughout every aspect of the world we live in. However, climate change impacts are uneven across the country and the world — even within a single community, climate change impacts can differ between neighborhoods or individuals.

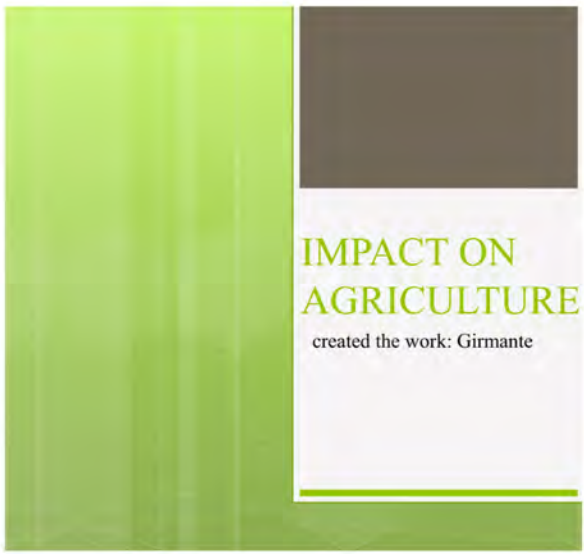


LITHUANIA

Unusual places for extreme weather phenomena that occurred in LITHUANIA

Lithuania has relatively hot summers, when the highest daytime air temperature exceeds +35 °C, and cold winters, when the temperature drops below -30 °C at night. In the territory of Lithuania, going from west to east, the continentality of the climate is increasing: the annual and daily temperature amplitudes are widening, the winters are getting colder, the snow cover lasts longer, the air is drier. The transfer of air masses from the west has also strengthened. All this indicates the decreasing continentality of the Lithuanian climate.





IMPACT ON AGRICULTURE
created the work: Girmante

Impact of climate change on agriculture

Agriculture is influenced by:

1. Climate:

- 1.1 Drought dries up vegetation and can cause forest fires.
- 1.2 Rains can wash away the soil on the surface of the earth and destroy and rot crops.



- 2. Pollution:
 - 2.1 Carbon dioxide emitted into the air.
 - 2.2 Radioactive substances.
 - 2.3 Abundant amount of chemical fertilizers.



- 3. The use of pesticides is no less harmful to the environment. Although pesticides in agriculture reduce the damage caused by pests and diseases, they are poisonous to humans and animals, and can also contaminate water bodies, groundwater and soil with dangerous pollutants.

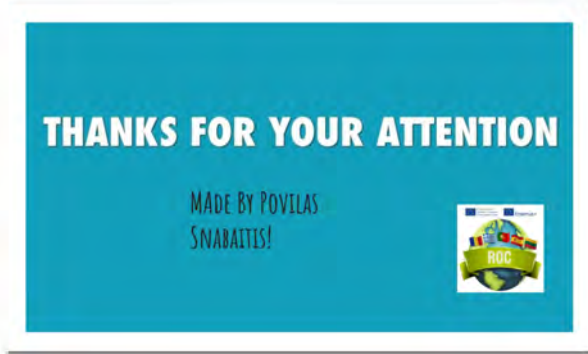
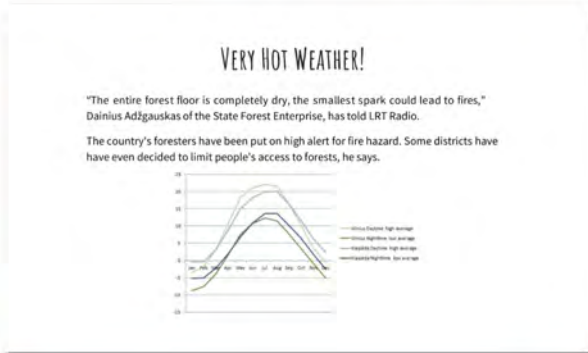


- 4. Human factors - conscious and unconscious actions, the following are important: physical and mental preparation, personality skills.



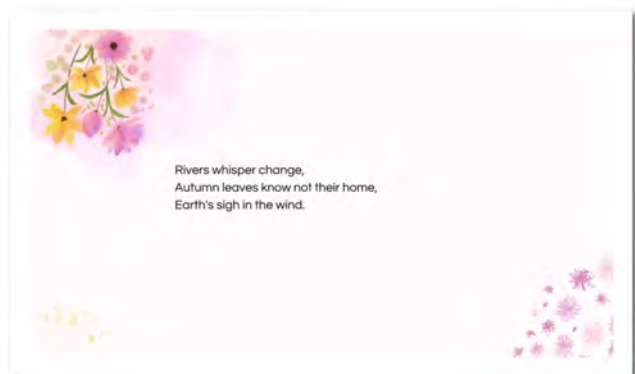
- 5. Snow - Melted snow can cause water to flood meadows. And because of water, barley can suffocate.





6.3 ROC Haiku on climate change

haiku (Japanese poem) on the topic of climate change:



6.4 ROC Music explores climate change:

For ROC students in Lithuania, music explores climate change; they learn about climate action using music, as singing is a universal language: The oaks in Lithuania will turn green:

<https://youtu.be/QedkK3xXzGM>



LITHUANIA



6.5 ROC Articles / PPTs with topics:

To protect the environment and preserve the planet for our children and future generations, Lithuanian students took proactive steps towards cleaner living habits: "You are the Green Change"!

Wastewater is another result of our daily activities. So, if we want to save nature, we have to manage wastewater responsibly. Effective wastewater management will be guaranteed if you have a wastewater treatment plant in your household. It cleans sewage particularly reliably. In addition, this device cleans the sewage in such a way that the water is suitable for a second use later - it can be used to water the lawn or wash vehicles and sidewalks.



It's no secret that one of the longest-lasting products is plastic. Therefore, choose such solutions so that it is formed as little as possible in your home. Replace small plastic bags for storing products with paper ones, and replace large plastic bags in which you put all your purchases with fabric shopping bags.



Window cleaners, liquid soap, dishwashing detergent - products of this type are found in every home. However, if you care about preserving nature, do not buy conventional products - prefer only organic and natural products. This should be done because they do not contain chemical components - dyes, fragrances, etc., so they are friendly to nature. True, they are friendly not only to nature, but also to your health.



GREEN CHANGES

Marius Pervizakis

Nature is our home. There are many reasons why it is necessary to protect nature. One of the main ones is that the quality of drinking water will largely depend on our decision to protect nature. The lower the environmental pollution, the better quality water we will enjoy. But that's not all: the cleanliness of nature also affects the diversity of flora and fauna. Well, and of course, it is also easy to notice that the less nature is polluted, the better our well-being will be: spending time in unpolluted air, we can strengthen our immunity and gain strength. So, these are very important reasons why we need to nurture nature. Well, now is the time to discuss ideas on how to do it.



One of the simplest and safest ways to contribute to the creation of a cleaner environment is waste sorting. Waste of various origins is a daily result of our activities. And by sorting them, we will definitely create a cleaner environment and preserve nature.



YOU ARE THE GREEN CHANGE



People kill animals.
 Even those who
 have families. I
 don't like it when
 animals are killed.
 Don't kill animals.



LITHUANIA

Let's use less plastic bags.
 Plastic products are known to
 harm animals and the earth. So
 I advise you to use fabric
 shopping bags that will last a
 long time and do not harm the
 earth.



People throw trash into
 forests and like. People,
 don't throw garbage
 anywhere, throw it in the
 trash can.



YOU ARE THE GREEN CHANGE

MADE BY UGNĖ MERKEVIČIŪTĖ



HOW TO SAVE THE ENVIRONMENT

HERES 12 WAYS HOW YOU CAN SAVE THE ENVIRONMENT:

- o Unfortunately, humans have not been very good stewards of the Earth over the years. To protect the environment and preserve the planet for our children and future generations, we all need to take proactive steps toward cleaner living habits.
- o 1. Consume less.
- o 2. Compost.
- o 3. Choose reusable over single-use.
- o 4. Upeycle more.
- o 5. Recycle properly.
- o 6. Shop secondhand.
- o 7. Buy local.
- o 8. Use fewer chemicals.
- o 9. Walk, bike or carpool.
- o 10. Use less water.
- o 11. Use your purchasing power for good.
- o 12. Conserve electricity.

THE PROBLEMS

- o **Climate change;**
The main driver of climate change is the greenhouse effect.
- o **Oil spills;**
There are many types of oil spills and most are minor, for example when oil spills from a ship when it is being refuelled.
- o **Plastic pollution;**
Plastics made from fossil fuels are just over a century old. Production and development of thousands of new plastic products accelerated after World War II.
- o **Food waste;**
Food loss and waste also exacerbates the climate change crisis with its significant greenhouse gas footprint.

CLIMATE CHANGE



OIL SPILLS



PLASTIC POLLUTION



FOOD WASTE



IF WE FOLLOW THE PATH THAT SCIENCE SHOWS US, WE HAVE THE POWER TO SAVE NEARLY ALL HABITAT TYPES ACROSS THE WORLD'S LANDS. THAT'S A HUGE WIN FOR WILDLIFE, BIRDS, PLANTS, INSECTS AND THE DIVERSITY OF LIFE THAT MAKES OUR NATURAL WORLD SUCH A TREASURE.



YOU ARE THE GREEN CHANGE

Created by Rugilė Stankevičiūtė

1. RECYCLING

Recycling- is the process of converting **waste** materials into new materials and objects. This concept often includes the **recovery of energy from waste materials**. The recyclability of a material depends on its ability to reacquire the properties it had in its original state.



2. ANIMALS ARE LOSING THEIR HOMES

Orangutans, tigers, elephants, rhinos, and many other species are increasingly isolated and their sources of food and shelter are in decline. Human-wildlife conflict also increases because without sufficient natural habitat these species come into contact with humans and are often killed or captured.



3. TRASH IN THE WATER

Garbage can easily become aquatic trash if it is not properly disposed of or securely contained. When garbage is littered on the ground rather than placed in a recycle, compost, or trash bin, rain and wind often carries it into storm drains, streams, canals, and rivers.

For example, a cigarette butt tossed on the ground might wash into a storm drain and travel through the stormwater system, which in some cases, leads directly into waterways.



4. ELECTRICITY PROBLEMS FOR THE WORLD

940 million (13% of the world) do not have access to electricity. 3 billion (40% of the world) do not have access to clean fuels for cooking. This comes at a high health cost for indoor air pollution. Per capita electricity consumption varies more than 100-fold across the world.



6.6 ROC Water Stories:

Lithuania is among EU leaders in terms of water purity and waste water treatment. Also, Lithuanian companies export modern water treatment technologies to many European, Asian and African countries:

STAND UP FOR ENVIRONMENT!

ERASMUS+ 2020 – 2023



"The cure for anything is salt water: sweat, tears or the sea."
– Isak Dinesen

- Similar to many regions in the rest of the world, worries over water stress and scarcity are increasing in Europe too, amid an increased risk of droughts due to climate change. About 88.2% of Europe's freshwater use comes from rivers and groundwater, while the rest comes from reservoirs and lakes, which makes these sources vulnerable to threats posed by over-exploitation, pollution and climate change.
- Water demand across Europe has steadily increased over the past 50 years, partly due to population growth. This has led to an overall decrease in renewable water resources per capita by 24 % across Europe.
- Agriculture is the highest water user in southern Europe, while cooling in power generation is putting the most pressure on water resources in western and eastern Europe.

"We forget that the water cycle and the life cycle are one."
– Jacques Yves Cousteau

WATER IN LITHUANIA



The Baltic Sea

- Lithuanian tap water is among the cleanest in Europe and is perfectly drinkable. This is because 100% of it is taken from abundant underground sources sheltered from human interference (rather than from surface lakes or rivers where it could be easily contaminated).
- Lithuania is among EU leaders in terms of water purity and waste water treatment. Also, Lithuanian companies export modern water treatment technologies to many European, Asian and African countries.



The Curonian Spit

- Lithuania has one of the largest fresh water supplies in Europe: we have a totally sufficient fresh groundwater supply.
- "This is an exceptional privilege created by nature. We can truly boast that we have unlimited water resources with 3.75 million cubic meters per day can be drained from the soil. This volume can be pumped out safely without degrading groundwater resources," said the Head of the Geology Service, Lithuania.



There is no shortage of lakes in Lithuania, and their great advantage is extremely clean water. One of them is Lake Dusia.



WATER
AGUA
ACQUA
VANDUO
SUÇLU
APĂ

"If there is magic on this planet, it is contained in water."
– Loren Eiseley



Dusia Lake

- We all have to use water much more efficiently. Saving water will also help us save other resources and help conserve nature.

"Thousands have lived without love, not one without water."
– W. H. Auden

"Nothing is softer or more flexible than water, yet nothing can resist it."
– Lao Tzu



Co-funded by the Erasmus+ Programme of the European Union

6.7 ROC Green Shopping Guide:

Dalius from Lithuania: In today's society, it's important to think about what we buy. "Don't buy what you don't need" is a helpful motto for responsible shopping. Buying things on impulse can hurt our finances and harm the environment. By not buying things we don't really need, we can reduce waste, save resources, and lessen our impact on the planet. It's also beneficial to focus on experiences and relationships instead of material possessions. Following this principle, it helps us make thoughtful choices that benefit both ourselves and the Earth.

Gabriele: People are used to having stuff they don't need, buying more than they need. It is actually not that hard. There are just a few basic things: refuse what you don't need, reduce what you do need, reuse what you can't reduce, recycle what you can't reuse and re-buy (buy recycled) whenever possible. It's that simple! The hard part is to actually do it. There are a lot of things that we use and never think of how much damage it does for our planet. Sometimes you just have to use it up, wear it out, make it do or do without and be a part of the solution, not a part of the pollution.

Orestas: Buying recycled items is an impactful way to help our environment. Not only does it conserve natural resources, but it also reduces the amount of waste that goes into our landfills. It saves energy compared to making products from scratch. From paper to plastic and metal, there is a wide variety of recyclable products available. Next time you shop, look for a label like "Made from recycled materials". It's a small change that can make a big difference. Remember, every recycled item bought is a step towards a healthier planet. Let's all do our part!

Rugilė Stankevičiūtė: If you have a lot of clothes and you don't have any more space, don't just throw them away, you can sell them. But if you don't need any more clothes or other things, don't buy them anymore and save money. Thus, before buying all that stuff, think of what you need/ don't need.



SUSTAINABILITY

CHANGE YOUR ATTITUDE, CHANGE THE WORLD!

The United Nations has declared 2020-2030 the "Decade of Action" to achieve the SDGs and calls for greater ambition and a sense of urgency to accelerate the transition.

To live more sustainably, we must REDUCE the WASTE we produce

Use compost at home. Don't throw away but reuse your organic waste to make compost for your garden or to create other original dishes/food.

To live more sustainably, we must REDUCE the WASTE we produce

We should use recycled containers to store food and also use paper bags rather than plastic.

To live more sustainably, we must REDUCE the WASTE we produce

Make changes or environmentally friendly options and reuse whenever possible, sometimes exchanging napkins and paper tissues for reusable options.

Use reusable cloth napkins and tissues.

To live more sustainably, we must REDUCE the WASTE we produce

- Make a shopping list;
- Choose to consume homemade products (cakes, biscuits, jams, sauces, yoghurts, cheese) instead of buying them;
- Grow herbs at home for seasoning and making tea/infusions.

Portugal is the 9th country in the UE with the highest waste production.

Tour UWMS
Urban Waste Management System

Each inhabitant of the SGRU ERSUC intervention area, by the end of May 2023, had already recycled 16.5 kg packaging waste, being below the country's average, which is 17.5 kg/inhabitant. Keep contributing!

To live more sustainably, we must REDUCE the WASTE we produce

Promote or participate in environmental initiatives, such as plugging actions to collect trash or cigarette butts from the ground, "adopt" a street or location, etc...

<https://www.plasticbusters.org/get-involved>

To live more sustainably we must REDUCE the WASTE we produce

Offer original gifts wrapped in magazine or newspaper paper

Use toothbrushes where you only change the brush head

Use butter wrapped in paper and a reusable butter dish

The products in the image above are less sustainable than those in the image below. Why?

WE NEED LESS OF THIS

AND MORE OF THIS



To live more sustainably, we need to REDUCE the WASTE we produce

Search, read labels, and always try to act in a sustainable way.



Check whether detergents are harmful to the environment, look for information in reliable books or websites.

To live more sustainably we must REDUCE the WASTE we produce

Choose products with indications that they respect sustainability, always paying attention to packaging labels.



<https://www.accept.pt/selos-e-logotipos-na-industria-alimentar/>

Other options more friendly to the environmentally

Research, read labels, try to always be informed about the most sustainable alternatives,



Solid shampoos and soaps emit fewer greenhouse gases as they are easier to transport and do not contain water in their composition



When consuming chocolate, we must pay attention to whether it was produced sustainably (UTZ) and properly separate the paper from the aluminum

To live more sustainably, we must REDUCE the WASTE we produce



Repair clothes or objects that can still be used

Other environmentally friendly options

SAVE WATER, ENERGY AND ALL NATURAL RESOURCES



Save cold water from the beginning of your shower



Cool down the house in a natural way

| | Incandescent | Fluorescent | LED |
|--------------|--------------|-------------|--------------|
| Power | 60 watts | 15-20 watts | 10-15 watts |
| Expenditure | 100kWh/year | 25kWh/year | 15kWh/year |
| Duration | 1,000 hours | 8,000 hours | 25,000 hours |
| Saving | 0% | 75% | 80% |
| CO2 emission | 100g/year | 25g/year | 15g/year |

Save electricity by choosing ecological light bulbs and turn off lights when not needed



More environmentally friendly options:

Reuse clothes that belonged to your parents/ brothers/ siblings/ friends or even buy in 2nd hand clothing stores or websites, for example Vinted-



My coat more than 20 years later...

Vinted

https://pegadaverde.pt/pt_pt/blog/post/sites-de-roupa-em-segunda-mao

6.8 ROC "Mountain Climbers" campaigns

participants at Lithuanian school took part to campaigns, climbing their hills at the Baltic Sea, to raise awareness on climate change and global warming:



6.9 ROC My proposal for my headmaster:

sorting bins and reverse vending machine - students bring plastic bottles, they are brought to real reverse vending machines and the money collected goes to charity:



CHAPTER 7



ERASMUS RANGERS OF CHANGE



Participants' Testimonials



STUDENTS' COMMENTS ABOUT THEIR EXPERIENCE ON TAKING PART TO THE MOBILITY IN ROMANIA

a) Spain:

Gonzalo Puig: The activities carried out in this mobility have helped us meet people from other countries; at the same time we helped the environment. I've had a lot of fun in this mobility because I love meeting new people. I think it is the best way to practise English although sometimes it's a bit difficult. And I think that the best activity was the activity at the TV station or the one at the Parliament because I've learnt a lot of things about these beautiful places and I think that both explanations were very easy to follow, making me interested in them. I think this kind of activities should be done more often because, in my personal opinion, it'll be one of the best experiences of students' life.

Marta Boronat: During that week, students and teachers from different European countries had the opportunity to enjoy and discover Romania, helping the environment - picking up trash, exchanging ideas and learning about our planet and - the best part for me - meeting all those amazing people that I will never forget. I am very grateful to have taken part in this first meeting; it has been one of the best experiences of my life.

Alejandro Guerra De Hevia: My first conception of Romania was very different from what it actually turned out to be. From what I saw, it is a beautiful country with many places to visit and enjoy, and with a lot of history behind every place. But, from my point of view, the most valuable thing of Romania and this project is the people involved in the activities. The workshops I liked the most were at those beautiful castles in Transylvania surrounded by European people from far and wide; what surprised me was the ease we communicated with everyone only by speaking English.

Melania Donoso: My experience in this project has been staggering. I feel that all memories are the best and I cannot choose one. I was impressed by the hospitality of Romanian people and how many kind and good people I have met because of this project. I am really grateful for this opportunity, which could not have been possible without Mirela.

b) Portugal:

Bernardo: Our ROC project started last October after the challenge launched to all 8th graders from Soure School Cluster by teacher Alexandra Duarte to participate in a challenging project, which raises awareness for environmental problems and their consequences in everyday life. It made us believe we can change the world for the better, through our environmental practices. Challenge accepted, 5 classes of 8th graders began developing different monthly activities. These activities aim to develop our English language skills, to raise awareness for the environmental problems that surround us, to develop practices that contribute to reducing the consequences of human mistakes.



STUDENTS' COMMENTS ABOUT THEIR EXPERIENCE ON TAKING PART TO THE MOBILITY IN ROMANIA

Dinis: These activities have been developed by other European schools, our project partners, who like us, believe that something can still be done for the environment, to make it healthier. I met teachers and students from other schools. The Romanians welcome us, in a fantastic way, from the moment we landed. Parents and their children were waiting for us at the airport and made us feel at ease in their homeland from the first to the last day of our stay, taking us back to the airport where we had to say goodbye. Project coordinator, teacher Mirela Vilcu, provided support and shared the necessary information for our stay.

Isabelly: Monday, 27th March, began with a fantastic welcome reception at the host school for the 4 foreign countries involved in the project. The Romanian hospitality that had started at the airport continued at the school entrance, where pairs of students, dressed up in Romanian attire, welcome visitors with trays of bread and salt. The reception was also attended by the ambassadors of Greece and Lithuania, with carefully prepared music and dances alluding to each of the participating countries. This day was full of surprises, all prepared with the intention of surprising and pleasing visitors. This reception was followed by a very well guided tour by Romanian students, who pleasantly introduced their peers of other age groups. While the students visited the different school areas, the library and swimming pool, they developed various socializing activities; teachers visited some classrooms where other students were curious and asked many questions. Young children offered letters with drawings. Students and teachers went to the historic centre of the city for a "walking tour" in order to discover some historical monuments (the famous Manuc's Inn, an 18th-century building, the Stravopoleus Church). At the National Bank of Romania we found important and valuable numismatic collections. We discovered the Black Sea coast, a clean-up campaign followed on the shores. Students verified that lack of civility is transversal to all countries. There were several bags students filled, only with litter that is not biodegradable, such as plastic, paper, styrofoam. Back to Bucharest at the end of the day, we were tired but also had our hearts full, with the pleasant feeling of another accomplished mission.

Vitória: Activity at TV station Digi24 with several journalists and working staff fascinated us most, as well as the recording of a documentary on climate change presented by one of the best known journalists of this channel. We went to the Romanian Parliament, where we disseminated our ROC project to a Romanian senator. Other activities were in Transylvania. This local clean-up activity was the highlight. We returned to Bucharest rewarded by an enriching experience. This true adventure in Romanian lands culminated with a morning of interaction, presentations from each participating country, and awarding of certificates, on March 31st. Magnolias, among other trees, were planted in the school grounds. The day of farewells brought the promise to meet again in the next mobilities. In a nutshell, all students unanimously considered that this was a transformative experience that broadened our horizons and world knowledge. We feel we are all working to reduce waste and create a more sustainable world, with daily gestures. This experience challenged us to step out of our comfort zone and adapt to a new environment, exposing us to different cultures and ways of life. All this was only possible due to the commitment and dedication of the Romanian students' families and obviously teacher Mirela Vilcu, who did everything to welcome us, to make us feel at ease and helped us whenever we needed. We express our deep gratitude for the hospitality and for the personal and cultural rewarding opportunity. It was a memorable experience that we will take for the rest of our lives. Thank you!



STUDENTS' COMMENTS ABOUT THEIR EXPERIENCE ON TAKING PART TO THE MOBILITY IN ROMANIA

c) Greece:

Georgios Kosofidis: I enjoyed the activities, we were all brought together, created unforgettable memories and friends from different countries.

Evangelia Mariaki: I will carry all new things that this mobility made me understand, respect and learn. It was so well organized, that I did not have any problem at all. People in Bucharest are really friendly and the whole atmosphere that this City gave me is spectacular. I was amazed at the attractions that Bucharest has.

Alexandros Osafi: Mobility to Bucharest was the best experience of my life. I would like to advise every child that this program is worth doing! This mobility taught me many things about the environment. I liked my collaboration with children from other countries and we have become friends! I already miss these days in Romania!

Sofia Salvaridou: I would describe my experience in this project as an unbelievable and Romania as a fascinating and welcoming place, with a rich cultural heritage and warm hospitality. My best memories were exploring historical sites, trying traditional Romanian cuisine and making new friends from other countries. The opportunity to dive into a different academic environment, exchange ideas with international peers and learn about new cultures I would describe as a valuable and enriching experience that everyone should try. I am very thankful that I participated in this incredible mobility!

d) Lithuania:

Vilma: What impressed me most is when we all tidied the Black Sea coast and the forest together, we discussed why it is important to take care of nature. We decided that no matter what country you are in, environmental protection is very important now and will be in the future. During the activities, we learned a lot about Romanian culture, history, and attitudes towards environmental issues. I really enjoyed all the activities. Great partners and students. Thank you for a wonderful opportunity.

Dovile: It was extremely interesting in Romania; we were pleased by warm and creative welcome, as well as by institutions and sights. Everything was wonderfully organized. The activity at Digi24 TV station was interesting and useful to observe how information reaches the world. It was wonderful to share project activities, experience and gained knowledge with a short TV report.

Gracijus: In my opinion, the project gave us an opportunity to meet new people, hear their ideas and remarks, how each of us could add to the environment and get to know how each of us could add to the environmental protection and find out how climate change is being dealt with in other countries. I liked Parliament the most, because the whole place was very big. I enjoyed going to the Black Sea, although it was very cold and windy, the sea was fascinating. It was my first time traveling by tube, because we do not have any in Lithuania. I liked it, I liked how fast it took us from one place to another. I enjoyed every activity and I loved Romania.



STUDENTS' COMMENTS ABOUT THEIR EXPERIENCE ON TAKING PART TO THE MOBILITY IN ROMANIA

Aida: The meeting was very well organized, it was a pleasant stay and I'm happy I got a chance to see famous places in Romania, as well as discuss on the topic of this project. During the project we discussed the problems, added to their solutions – we picked up rubbish at the seashore of the Black Sea and in Carpathian mountains. I was impressed by Bran castle and Peles Castle, the Carpathian mountains and the Black Sea waves.

Alma: It was very useful because we got to know many effects of climate change are and how they affect our daily life. We met many wonderful people who are interested in the same topic. We got to know friends from Romania, Greece, Portugal and Spain. The meeting was very well organized. We were amazed by the warm welcome. In my opinion, the most interesting activities were working on project goals face to face, in teams; discussing about the project, meeting a Romanian senator and debating on the causes of climate change. It was extremely useful to raise the participants' awareness about climate change.

Tadas: I met a lot of new people, even exchanged social information. During the meeting we discussed the issues of climate change, environmental protection, recycling, sorting out. We also met a senator of Romanian Parliament who told about the job performed. At "Digi24" TV station we observed the programme about environment being filmed. The most interesting activity was seeing the mountains. I like hiking mountains and the castles were beautiful as well. It was my first time seeing iconic Dracula's castle.





STUDENTS' COMMENTS ABOUT THEIR EXPERIENCE ON TAKING PART TO THE MOBILITY IN SPAIN

a) Portugal:

Martim Oliveira: My experience during the Erasmus mobility was incredible, we created a bond with people from different nationalities. We created incredible memories and I was impressed by many things, we went to Madrid. I loved activities in Prado museum, I was astounded by the cave activities, by all resemblances it had with human forms. I made a lot of memories and friends there. Activities in Romeria were experiences I'll never forget. I liked every single activity, but my favourite was to Madrid, especially to Prado Museum

Jasmina: My Erasmus mobility to Tomelloso was amazing. Every day we had amazing activities. I was impressed by the way everyone was willing to live the complete experience and in a totally sustainable way.

Andrei Obreja: My experience outside my country was incredible. I met new people, made new friendships and met new teachers. My best memory was the windmills of Don Quixote. I liked our project activities in Prado Museum the most. Those works of art left me speechless. I was impressed by everything from the moment I arrived until I left the country. The city, the mills of don Quixote, the European Parliament in Madrid, the Cathedral of Toledo. Thank you to my teacher and coordinator for this opportunity - without you this would not be possible. Thank you very much everyone!

b) Romania:

Daria Giusca: I learned about the culture of Spain, of Greece, Lithuania and Portugal, I made new friends. We talked about our school environmental activities. I still keep in touch with some children from this project and I hope that one day we will meet again.

Vlad Erik Cristian: My Erasmus experience changed me and my life forever. In addition to all the interesting information I've gathered about different cultures, I also met many teachers and very kind children who made my stay in Tomelloso unforgettable. I really liked living in another country, among foreigners, because it makes you think: Maybe we are not that different at all. I was most impressed by people's hospitality and kindness. They were very happy to talk about their countries, their traditions, their food. I kept in touch with most children and we are still friends.

Mihai Gheorghe: The mobility in Spain was life-changing. We went to Madrid for environmental education and in Tolledo, where we took action and discussed project priorities. My best memory is when we went kayaking; it was a very interesting and wonderful experience. What I liked most was the fact that there were a lot of kids from different countries, but still, with English language, we managed to communicate with each other. I was impressed by the great activities we had and how well those activities were structured. It was a wonderful experience.

Catalina: People were amazing and I am so thankful for all the activities and fun I had. I met amazing friends that someday I will visit. I saw the greatest views of all time and I learned so many interesting things. Every day we did something new.. The school was nice and the students were smart and kind. Spain is a beautiful country.



STUDENTS' COMMENTS ABOUT THEIR EXPERIENCE ON TAKING PART TO THE MOBILITY IN SPAIN

c) Greece

Adam: The mobility in Tomelloso, Spain, was a once in a lifetime experience. From the very first day we got to know the Spanish culture and way of living. We also experienced the warm hospitality of locals. Students and teachers helped us experience the Spanish way of living by showing us some aspects of their daily life. Activities in Toledo impressed me due to its castles and natural beauty. My best memory is the swimming/canoeing activity that we did in the lagoons, an experience that really bonded the Rangers team.

Bechtsi: I met amazing people and I am grateful that we are part of this project. At the natural park Lagunas de Ruidera, we did hiking and canoeing activities. We cleaned a beautiful forest which had bottles, cigarettes and papers. Through this trip I improved my communication, language and intercultural skills but also had the chance to work as a team with people from different countries and cultures for a better environment. This was life-changing and it will always have a special place in my heart.

Leontaridou: I felt honored and really happy. The mobility to Spain was an amazing experience. I made friends and I met a new country and culture. My favorite activity was in Ruidera. There we went hiking and canoeing and then swam in the lake and had so much fun. We also went to a nearby forest and collected some litter. I remember the bright smiles of everyone that day. We also worked as a team for the environment and found ways to help it together. Even though saying goodbye was tough, I will remember it as the best experience in my life.

Alexander Kaktis: "Erasmus Changes Lives" is the best phrase that can be used to define and characterize this experience, this gift, must surely be a life-changing experience. The most memorable thing that will stay with me is the company of students from different countries throughout our activities.

d) Lithuania:

Vilma: We had a chance to meet our peers from Portugal, Greece, Spain and project coordinator country – Romania. All participants worked in teams, using negotiation and other skills to involve students in the solutions of climate change. The project made a huge impact on the participants.

Gabriele: We discussed difficulties we face, connected with environment, as well as actions needed in order to make positive impact on the questions of climate change. Waste management and recycling workshops helped us look at the problem from a creative side. We understood human activities and their impact on our landscape, as well as what needs to be done to change it.

Gracijus: This mobility was unforgettable, with a lot of interesting environmental activities. We communicated and worked in international teams from other European countries. When there were activities in nature, we observed and collected data. This helped us get a wider idea on problems, as well as possible solutions. I understood that if each of us did something, we would live in a more beautiful environment. Something must be done before it is not too late. I am thankful that I met peers from other 4 countries.



STUDENTS' COMMENTS ABOUT THEIR EXPERIENCE ON TAKING PART TO THE MOBILITY IN SPAIN

Dovydas: The week in Spain was fruitful. In The Palace of Fuensalida we met the Minister of Sustainable Development in Castilla–La Mancha and got the idea of sustainable cities. The European Parliament office, Madrid, Prado museum, El Retiro Park were astonishing. We were blinded by the beauty of Lagunas de Ruidera natural beauty due to its amazing and clean nature. It would be a pity to lose such wonderful natural sights and each of us must do something.

Gabriele: I was impressed by the old mills of Campo de Criptana and Toledo – the city of three cultures: Christianity, Islam and Judaism, as well as a path along the Tagus River. We liked outdoor activities, such as hiking, climbing. It helped understand that if we do not start doing something, we might lose these amazing spots. While observing and collecting data, we found out about the impact of extreme weather on the environment.

Grita: We are thankful to the Spanish hosts, the teachers, Headmaster and students for perfectly planned activities, hospitality and reaching to the common aim. We met new friends, improved communication and English skills, got to know the traditions, culture and history and are looking forward to further meetings.





STUDENTS' COMMENTS ABOUT THEIR EXPERIENCE ON TAKING PART TO THE MOBILITY IN GREECE

a) Portugal

Ana C.: My experience in Thessaloniki, Greece was a transformative journey. The memory I cherish was really fun and brain challenging. What impressed me the most during that mobility was the vibrant exchange of cultures and ideas. It was awe-inspiring to witness students from various backgrounds coming together to learn, grow, create lifelong friendships. The international atmosphere and the exposure to different perspectives enriched my worldview, fostering a deep appreciation for diversity and unity. Erasmus opened doors to new horizons, I am forever grateful for the opportunities it provided, especially in what concerns the planet: besides stirring up the sense of urgency to do more for the sake of our planet, I realise now how important and impactful our actions will be.

Leonor A.: I was so nervous at the beginning but it was the best experience of my life. I stayed with an amazing family, they were so kind and nice. I loved the contact we had with culture of the country. I met fabulous people and tasted amazing food. The whole experience was very important to me, made me a more responsible person, made me learn a lot about the environment and the urgent need to protect our planet, and I've made friends for life.

Petra M.: I loved the Erasmus project, because I could experience new things, making new friends, seeing how they live in their country, communicating with other people, knowing more about Greek culture. I really enjoyed that we learned in a different way, the impact of the environmental problems and how they will affect us in the future. I liked that the girls hosting us made sure that our experience there was incredible, we had a really good time. My favourite moment in this mobility was that I got closer to people that I wasn't that close to before.

Simone G.: The Erasmus program gave me a wonderful opportunity to travel to Greece and experience a different culture. My best memory was socializing with other students from around Europe. I was able to make deep connections with people from diverse backgrounds, learn about their customs and traditions. Beyond socializing, another aspect that I liked most was going to Edessa Falls, located near Thessaloniki. The beautiful falls were a unique attraction and provided a beautiful escape from the busy urban life. Through my experience, I learned valuable skills like teamwork, problem-solving, communication. I learned about climate change, sustainable practices, their impact on the environment. I had a wonderful time there!

b) Romania

Iustin Pirvu: I have to admit that I didn't know what to expect when I left. I wanted to meet new people and practise my English. It was definitely one of the most beautiful experiences I've had so far. I met respectful, educated people, having a different lifestyle than ours. I made new friends from other countries and talked more with those from my country, Romania. I liked all the activities, but in my opinion, the most beautiful was the activity to the waterfall in Edessa. I will never forget all those moments!



STUDENTS' COMMENTS ABOUT THEIR EXPERIENCE ON TAKING PART TO THE MOBILITY IN GREECE

Eduard Flisc: My experience in the Erasmus+ project "Rangers Of Change" was unforgettable. It all started from the first day when I had the chance to meet wonderful people I will never forget. I was surprised how kind and friendly they were, their hospitality was wonderful. We worked in the most important Educational Center in Thessaloniki where we shared our experiences with the environment and how we can prevent its destruction. I was pleasantly surprised by the beautiful Edessa waterfall. This experience was one of the most beautiful in my life, I am very grateful that I had the chance to participate in this wonderful project.

Daria Preoteasa: When I arrived there, I was scared to meet the family that hosted me, but, luckily, from the moment I met them until I left, I felt exactly like at my home, being treated perfectly and getting along with them like I knew them my whole life. During the mobility, I was impressed by all the other participants, the good way they treated us and made us not feel uncomfortable about the fact that we were far from our families. I am very grateful that I met such people. It was the best week of my life, everything seemed unbelievably perfect. I am thankful for this experience, I met great people, I learnt incredible facts about Thessaloniki! If I could, I would participate in this Erasmus project all over again! Due to these facts, I want to thank everyone who made this experience possible and perfect for us!

Alessia Stancutu: I am very grateful for participating in the Erasmus project. I first had the idea of joining such a project from my cousins, who both participated to Erasmus+ projects. They came back with a wide smile on their faces, told me how much fun it was. So, thinking I could try to enter myself, I applied for the exam. There were lots of students there, eager to go on this new exciting adventure, so many that I thought I didn't even have a shot. Low and behold, I managed to win a spot on the "Rangers of Change" team! Upon arrival, we met our temporary families. They were very kind people who we'd end up missing once on the plane back. They were the kind of people you'd never want to say goodbye to, and could never thank enough for what they offered. We learnt about making an active change to halt the progress of climate change. We learnt about Thessaloniki's culture and rich history, from their Macedonian treasures buried deep underground to the bloody history of the ottomans creation. We made new friends, from Greece all the way to Lithuania, whom I still keep in contact with. The Rumanian team also got closer as we ventured with our hosts to fulfill the activities. Erasmus project was about going on educational activities in which I learnt more about myself. We have learned, as a group, so many life lessons just by interacting with cultures and opinions that differ from ours. I am grateful for having such an eye-opening opportunity. An opportunity we all earned by successfully taking part to this initiative to change the world for the better.

c) Spain

Patricia Ruiz Cotilla: The first thing I would like to tell you about is the warm hospitality I received. Maria was one of the best sisters I could have and her family treated me as if I were another one of them. I had very good moments with all of them during the days I stayed there. I saw so many things and I learned a lot about climate change, how important it is and a lot of concrete information that I can use in the future. I learned about the culture and the way of life there. I would repeat this mobility a thousand times if I could, it has been the best experience of my life!



STUDENTS' COMMENTS ABOUT THEIR EXPERIENCE ON TAKING PART TO THE MOBILITY IN GREECE

Catalina Maestre Macías: I've breathed the essence of Greece. My teammates and I have experienced the Greek culture, we have seen significant sites and the beauty of the country beyond. All this is complemented by the knowledge we have acquired and the bonds we have formed with our hosts, which I am sure will last for a long time. We learned about everyday life in Greece by living as locals with our host families and sharing the similarities of our cultures. Personally, I particularly enjoyed the fourth day when we went to Edessa and activities in the museums. I also enjoyed the Greek dance performances at the welcome and closing ceremonies. We learned about the environment and what we can do to take care of our planet through interesting lectures, activities and even a film. It was a perfect combination of fun and education. We have grown as people by gaining knowledge, social skills, bonding with people from different countries and getting a glimpse of all cultures, as well as becoming more aware of climate change and the environment. We are grateful for this opportunity and congratulate the Greek team for making our stay unforgettable.

Mercedes González Navas: I would like to thank all the people who made this unique and unforgettable Erasmus experience possible. We discovered beautiful landscapes in and around Thessaloniki and got to know all the participants better as Rangers of Change through fun talks, games and different activities. We would like to thank all the families and teachers who made us feel at home during this week in Greece, as well as all the students who showed us the art and culture of Greece and with whom we made friendships that will last a lifetime. I hope we can meet you again. Thank you for everything!

Zaira Novillo Chinchilla: It was one of the most exciting moments of my life. From the very first day, I spent so much time with all the teams involved in the mobility and our Greek hosts. I really felt at home with them. It was a wonderful experience that I would like to repeat. The houses were so comfortable, the food was amazing, all the activities planned for us really helped to raise awareness of the importance of protecting the environment. I would like to thank the host families that welcome us with open arms. I am really grateful. I hope we will meet again in the future. I would also like to thank the Greek Team, especially Mr. Ampatzidis, for all their hard work.

d) Lithuania:

Armandas: I really enjoyed my experience within the family I was staying with. Staying in a family helps to immerse yourself within the culture of the country you are staying in. I enjoyed the friendliness of those with me, the waterfall activities. I loved the gifts that were given to me. My best memory by far was saying goodbye to everyone because that was a very heartfelt and emotional moment. I was impressed by the amount of effort put in by the host country to give us a warm welcome.



STUDENTS' COMMENTS ABOUT THEIR EXPERIENCE ON TAKING PART TO THE MOBILITY IN GREECE

Martyna: What I liked the most about Erasmus was that feeling when you make mistakes and learn from them. I was impressed by other kids' courage to talk in public. I was scared to do that, I was scared to make mistakes, scared that someone will think something bad about me and because of that I didn't talk, but other kids were scared but talked. I was impressed by that and have become more courageous. My best memory about Erasmus was, when many kids from the project travelled by bus. We took a walk through the city and then we all gathered and went to sit on the stairs, talk and play "truth or dare". I won't ever forget that time!

Girmante: I enjoyed the beautiful horizons. I found peace, as I was by the sea, the clear water struck me. I met people who very hospitably welcome me into their homes. Those people were like a second family to me, it was very difficult to part with them. Greece really impressed me as a country, it was simple but extraordinary. The biggest impression was that the city was calm, there were no robberies and I felt much safer. I was impressed by the activities, especially the waterfall ones, there was a very beautiful view of the mountains, as we do not have anything similar; I will have this stay in my memory for a long time. I would love to go back for more Erasmus experiences!

Ugne: My experience in Greece began with an acquaintance with other Erasmus' participants. This week was like a dream come true for me because I met wonderful people, saw how Greeks live, lived with a girl who became like a sister to me, as well as took up thoughts on how I can stop the pollution of nature in my country. All activities expanded my knowledge not only about nature, but also about Greek culture. This project helped me strengthen my language and communication skills. All the emotions experienced are unique.





STUDENTS' COMMENTS ABOUT THEIR EXPERIENCE ON TAKING PART TO THE MOBILITY IN PORTUGAL

a) Romania

Maria Stamat: My first time in Portugal was for ROC Erasmus project with my teacher and students from our school. When we arrived in Soure, Portugal, our host families were waiting for us at school. I already knew some of the teachers, since they came to Romania for the same project. I had a great time with the family. We had dinner together, we played games, we went to a lot of places to spend some great time and to see Portugal. They were really nice and kind, like I was their own child. The Portuguese school was amazing. I saw a lot of different ways of teaching and I met a lot of new and nice people.

Damian Duse: This Erasmus project from Portugal was the best experience of my life. The school from Soure was very nice and big, the kids were friendly and kind. I made a lot of friends in their school and I liked their teachers a lot. In Portugal I liked activities at The University of Coimbra which was built in 1290. The family I stayed at, was very welcoming and nice, I felt like at home. Jonatas's family drove me to the Atlantic Ocean and to a restaurant. I liked very much there, I hope I will go see them again and they will come to Romania.

Maria Carstea: My experience in Portugal was unforgettable! Since my first day in Soure, I knew that it is going to be a magical experience. The family that hosted me made me feel exactly like home! I'm glad I made friends and even one best friend, the girl that hosted me! The activities were really interesting: we socialized and learned about our planet at the same time. My favourite day was Tuesday, when we explored Coimbra and became even closer with each other! I will always be thankful for what Erasmus has offered me and I'm sure that this was the best experience of my life

Andrei Pop: The Erasmus++ mobility in Portugal was one in a lifetime experience. A great opportunity I had, I am glad I took it. Not only that I met wonderful people and made a lot of friends, but the activities were also incredible and unique. We visited all types of environmental facilities, we had a great time with the Portuguese students. I loved all activities because the involved people got the chance to live awesome experiences.

b) Lithuania

Girmante: I met people who very hospitably welcome me into their homes. Those people were like a second family to me, it was very difficult to part with them. Portugal really impressed me as a country, it was simple but extraordinary. The biggest impression was that the town was calm, there were no robberies and I felt much safer. I was impressed by Coimbra University. The university library looked very impressive, the architecture impressed me as well.

Egle: Portugal mobility was full of excitement and fun activities. I liked planting trees most, we all helped each other and had fun together. What attracted me most was the beauty of streets of Coimbra. There was a lot of greenery everywhere, oranges growing in the streets were the juiciest! I am very happy to be part of the Erasmus project, I created so many memories and met wonderful people.



STUDENTS' COMMENTS ABOUT THEIR EXPERIENCE ON TAKING PART TO THE MOBILITY IN PORTUGAL

Gabriele: This mobility was the best I ever had. I really liked activities at the clay factory. My host was AMAZING. She took me to her karate lesson, it was cool. There is so much respect and it looks very subtly but powerful too. My host took me to traditional dances in the ranch. It was very fun. I got to dance, too. Surprisingly, I did pretty well. It wasn't too hard for me and I enjoyed it.

Martyna: Erasmus project to Soure was the best trip ever. The best memory was on Tuesday when we went to Coimbra. I liked my host family the most, they are really nice people. I loved spending time with them. During the mobility, I was impressed by kids' friendliness. I was impressed by Portugal's beauty and how people always smile.

c) Greece

Sofia: It was my first time travelling outside my country and it was the best experience. The best memory was in Coimbra, I really liked the beauty of the country, the colourful buildings and the organisation they had in each area. I was impressed by the university of Coimbra, especially the library with its rich history and decoration. I made many new friends and communicated with foreign cultures. Everything will be unforgettable for me, thanks to the Erasmus program for giving me such an opportunity.

Anthi Zacharia: I had experiences that stay in my mind forever. My absolutely favourite memory was when we went to Aveiro, this place was so beautiful and colorful that I fell in love with the activities we did. The thing I liked best was the activities in Coimbra, we had so many, each one was really interesting and we learned many new things. I didn't know that I would find all these hidden gems such as new places like Soure, a lot of people there being so kind and welcoming and all monuments that hide so much history. This experience helped us broaden our minds and learn about new things, about history and we made new friends that we will cherish forever.

Fotini: I was thrilled I made new friends, tried new food and learned new things about the environment and how Portugal deals with it. It was really interesting to see how Portugal works with the environment and how many things they do to help and change it. I think the best memory was when we went to the ceramics activity. I liked to see how the garbage gets separated and where they put everything. I was happy to communicate with new people that live in another country with a whole different culture and new things to try. I truly believe that everyone would want to experience this, it is worth it!

Ioanna Stavreti: I would like to give special thanks to our teachers for giving us this unique opportunity to travel to a different country. All the things we did, all the people we met (that we all call friends now) will remain in our hearts forever as memories. From this mobility what I liked most was getting to know the Portuguese culture, trying new foods, sweets, meeting new personalities. As this mobility had also environmental purposes, tree planting activity was my favorite activity. What I found really interesting was the history of university of Coimbra.



STUDENTS' COMMENTS ABOUT THEIR EXPERIENCE ON TAKING PART TO THE MOBILITY IN PORTUGAL

d) Spain

Beatriz Martínez Morales: Soure was a great experience and I'd love to return one day. My favourite day was the second one in Coimbra. People had told me it was a beautiful city and they were absolutely right. The guided tour of the university was very interesting and the library left me speechless. It was such a beautiful place! Our Portuguese friends took us for activities to a park by the river. We had a great day because the weather was so good and we got to know our European friends better.

Marta Boronat: It has been a very educational experience and I have enjoyed the activities, especially the University of Coimbra and the afternoon in which all the students had activities in the countryside. The best thing for me was that I could enjoy the company of students and teachers from each participating country. The welcome we received from the Portuguese students was wonderful, as well as the treatment I received from my host family.

Rubén García: It was an unforgettable experience I would remember forever. During this mobility, we did a lot of interesting activities that I had never tried before, such as planting trees, activities in different factories or in the Maritimes in Aveiro. My favourite activity was the recycling plant in Coimbra. What impressed me even more was how much waste is actually produced and how it is transformed into something we can use again and again. I am grateful to my host family, who made me feel at home every day.

Hugo Carretero: ROC project is about the environment, we had talks about climate change almost every day and what we can do to stop it. In Coimbra we had activities at the University. We had activities in Aveiro, where we had the opportunity to try Portugal's famous cod. I enjoyed all the activities we did with the program and with our host families. The family that hosted me was really nice, they were friendly and the food was amazing.

María Merino: The incredible experience in Portugal was about climate change and how to prevent it, so most of the activities we did were about it. On the second day all children went to a natural area where we planted trees. This activity was so fantastic that the teachers planted trees, too. We also went to Coimbra where we learnt about its history. Another activity we did was to visit a recycling plant. They explained to us how it worked. Another day we went to Aveiro. It was like being in Venice, an experience to get to know other cultures, share experiences and practise English. Our partners and host families were very funny and I was able to socialise with them. My host family was nice and took good care of me.





STUDENTS' COMMENTS ABOUT THEIR EXPERIENCE ON TAKING PART TO THE MOBILITY IN LITHUANIA

a) Romania

Ioana Cristescu: I felt very good in Lithuania in the ROC Erasmus+ project. All the children and teachers were kind, respectful, polite. The hotel room was comfortable and spacious. I made new friends and we laughed a lot together. All activities were funny and interesting, I learned a lot of things about environment and about this amazing country. In Vilnius we bought some souvenirs. It was a very clean city, I was impressed how polite people in the capital were. At the parliament, I learned new information about European Union and Schengen Area, playing a kahoot game. I absolutely loved Lithuania, an amazing country with magnificent and unique landscapes.

Mihai Rosca: I am glad that I participated in ROC Erasmus+ project. I am grateful I had this opportunity that not everyone has. Before participating, I had heard a lot of beautiful things about it. Going to another country without parents, talking to other kids from other countries was beautiful. In Lithuania the houses, the lakes and the gardens were gorgeous. We met other students who were very communicative and full of joy. It was a unique experience that I will never forget.

Eric Dragoman: The experience in Lithuania was amazing. We met children from different nations and learnt about their countries, people and cultures. We worked together on ecological and recycling projects which could help our planet some day. All children were really nice, the ones from Lithuania were very welcoming. The sights in Lithuania were beautiful and the food was amazing. I hope our work was helpful and things will change for the better. We made friends and we worked together. I will be forever grateful for this experience and I hope that I could visit Lithuania again one day.

Ana Ghimes: I made lots of new friends, we had fun all week there. The activities were very interesting, captivating and fun, keeping us entertained. We learned about climate change and recycling, we changed information about ecology in our schools, in different countries with different experiences. Teachers were nice and respectful with us. Vilnius was a beautiful and clean city with good food and amazing places. When we left Lithuania we felt really sad leaving all the amazing people we met there. We will always miss the unique landscapes and places we saw there.

b) Greece

Stavros Vezyras: Going to Lithuania we passed through beautiful countries with amazing views. Even though we were anxious about what we would see there, the different landscapes made us all calm and relaxed. My host did everything to make me comfortable and made me a part of their family. They guided me through their city, we went to restaurants, we had so much fun. All activities in Lithuania were amazing but the one I liked was science and creativity activities in STEAM Centre.

Gloria Kurti: The mobility to Lithuania was a very pleasant experience, because I met a lot of new people, new habits, traditions, customs that I didn't know. I liked most the activities at Vilnius Europe Direct Centre. Vilnius, capital of Lithuania, inspired me a lot, because it had a lot of cool places and attractions. My emotions were joy and sadness because I spent a genuinely nice week with different people and different habits, but it had to end, we had to say goodbye.



STUDENTS' COMMENTS ABOUT THEIR EXPERIENCE ON TAKING PART TO THE MOBILITY IN LITHUANIA

Megi Hysa: Lithuania was one of the most beautiful countries that I have ever seen. When I arrived there, the family that hosted me was waiting for me. We had such a beautiful time together and it felt like it was my family. We were so close together and had a wonderful time! The students were so friendly with us, and I really enjoyed it. Teachers did everything for us to be satisfied, Lithuanian people are very friendly. The activities were incredibly fun, we learned a lot of new things. My favourite place was the capital city of Lithuania, Vilnius. I liked it so much because we don't have the buildings they have there, I found their lifestyle so interesting. I really want and hope to see Lithuania again.

Christina Tsompanoglou: What I liked most in mobility to Lithuania were the cities that were clean and the natural landscapes. Their hospitality was incredible and the family that hosted me made me feel like I was part of it. I didn't want to leave, we said goodbye crying. It was an amazing experience, I would do it all over again.

c) Spain

Arantxa Serrano: This experience will be the one that I will remember forever, going to another country has taught me that despite the difference in cultures we all have many things in common and we are not as different as we usually think, I have loved meeting new friends that I still have even though we are so many kilometres away.

Celia Moreno García: I have been lucky to travel and learn about Lithuania. The activities we have done were very fun and creative, I have really liked them. They allowed us to know new things about places and each other. I have met very nice people. This experience has been unique, I'm very grateful for being able to live it.

David Ruiz: Mobility to Lithuania has been a great, enriching, a fun experience. I have met very interesting people from other countries who have shown us what they are like. It helped me get to know my classmates and teachers who accompanied us. What I have enjoyed most were the group activities with the other students, which helped us connect with each other and forge great friendships.

Francisco Manuel Serrano Soriano: In this mobility I have learned a lot about this beautiful country that so few people in our country know, I have seen with my own eyes things that we are often told in high schools: we are all the same and we are not as different as we think we are. It was an experience that helped us to discover ways to fight against climate change.

Pilar Nieto: Thank you, Daiva, and all the Lithuanian team, for your hospitality and for organising such interesting and inspiring activities during our visit to your country. Through these activities we had a wonderful opportunity to get to know you better and learn more about your culture, while focusing on our common goal of fighting climate change.



STUDENTS' COMMENTS ABOUT THEIR EXPERIENCE ON TAKING PART TO THE MOBILITY IN LITHUANIA

d) Portugal

António Dias: It was a real adventure. It was the first time I travelled abroad and the first time I travelled by plane. The seven days I spent there were unforgettable, I will have memories for the rest of my life. I loved all activities and spending time with new people was the best. I hope to see Lithuania again.

Guilherme Silva: The ROC project was an experience I will carry with me for life, a week of great fun and learning. I made new friendships that I'll carry in my heart. My favourite memories were when we went together to activities, because we got to know each other. What struck me most during the mobility was how easy it was to make new friends. It was a unique and unforgettable experience that I recommend to everyone. I developed my socialization skills a lot and the way I communicate with others. Not being from the same country meant that we learnt about and got to know new cultures.

Matilde Gonçalves: During my mobility experience in Lithuania, I had an incredible journey filled with learning and cultural exploration. The highlight of my time was Vilnius, where I was marveled at the stunning architecture and vibrant street life. I loved the warm hospitality of the locals and the opportunity to engage in meaningful projects with students from diverse backgrounds. What impressed me most was the rich history and the dynamic blend of tradition and modernity that Lithuania offers. This experience has broadened my perspective and enriched my academic journey in ways I have never expected.

Laura Almeida: The mobility to Lithuania was a life changing activity, an opportunity to meet new people from various places in Europe, to spend an entire week with them. It was with no doubts the best memory I have from there. I loved every single activity, the places we visited and I was impressed by their culture. For me, the week I spent in Lithuania was the most outstanding week of my life, in which I met new, amazing people, an incredible country, while I was learning more about the protection of our planet and improving my English. For sure, it's a remarkable memory.

VIDEOS:

1. In Romania: <https://youtu.be/X6R57ap4Ttw?si=a3xSHaGL3kVx2YkR>
2. In Spain: https://youtu.be/s2Lo1Xt_Siw?si=VrCLV7SSZ3Z92W0e
3. In Greece: <https://www.capcut.com/presentation/7297653381647040513?workspaceId=7287568290015248386>
4. In Portugal: https://youtu.be/W-keCaf859k?si=YfcXi6J-BL5_pCz5
5. In Lithuania: <https://youtu.be/fA3Kg3efpTo?si=bH8dEOXt077Oc0ie>

CHAPTER 8



ERASMUS RANGERS OF CHANGE



Project Dissemination





8.1 ROC Social Media;

ROC Website: <https://rangersofchange.eu/>

ROC Facebook page: https://www.facebook.com/rangersofchange?locale=ro_RO

ROC Instagram: https://www.instagram.com/rangers_of_change/

ROC YouTube: https://www.youtube.com/results?search_query=rangers+of+change+erasmus+%2Bproject+ka220

8.2 ROC MOBILITY IN ROMANIA;

<https://www.facebook.com/LTEmbassyRO/posts/pfbid02WiB4HVtu6YmGsC2NdsxiREHJS4BtkubWaBkDNfarGtJvV1rky1weZk9F7uFBsnr6l>

<https://www.facebook.com/photo/?fbid=10229944168965360&set=pcb.6395749500459795>

<https://www.facebook.com/mirela.vilcu.3/posts/pfbid0FTWB7TKQgZWEmae2SmVxq8vURwXvbYkthsELUjVWJda75JebmV3rQFBkGKEU5Zxdl>

<https://www.facebook.com/AEMartinhoArias/posts/pfbid031KjT8BQXxXEqdGDWUv1Yfm1QzrWdiwK7RkwTeAQXkq1Dzm78T7zKA1FaH1NF6YAl>

<https://www.facebook.com/AEMartinhoArias/posts/pfbid0bjkxvNfl324yXMDY3V7hQpP8DEmuu7tYGVmJqsfiU622BFHbKoWoUijJ5rtLNuTopl>

In Romania, on School's Facebook page: https://www.facebook.com/photo/?fbid=10229949239372117&set=pcb.10229949254052484&locale=ro_

On School's webpage: <https://scoala195.invatamantsector3.ro/proiect-erasmus-2024/>

In Portugal, on School's webpage: <https://www.escolasdesoure.pt/web/2023/04/primeira-mobilidade-no-ambito-do-projeto-roc-do-programa-erasmus/>

In Lithuania, on School's Facebook page: <https://www.facebook.com/media/set/?vanity=GGTV.LT&set=a.692379732889052>

On School's webpage: <https://www.graziskiai.vilkaviskis.lm.lt/informacija/projektai/erasmus/450-rangers-of-change-roc-pokyciu-iniciatoriai-2023-03-27-32>

https://www.graziskiai.vilkaviskis.lm.lt/458-roc-in-romania-march-26-31?fbclid=IwAR0VnQIAHmZpDY3HNbC6Vo0QW0-bzFwvsJq6N79DzyZq_wX3E6fYeo28WrUI

8.3 ROC MOBILITY IN SPAIN;

The Minister for the Ecological Transition and the Demographic Challenge, the Third Vice-President of the Spanish Government, Teresa Ribera, has congratulated Spanish Coordinator and expressed her support for the project. The following paragraphs are part of the letter she wrote in response to the letter sent by IES Eladio Cabañero Headmaster, José Ángel Martínez Mínguez:

"Thank you for the letter you sent me regarding the Erasmus + project "Rangers of Change", in which IES Eladio Cabañero is participating together with other schools in Romania, Portugal, Greece and Lithuania, developing actions and activities to raise awareness about the environment and climate change.

I would like to congratulate the entire educational community of IES Eladio Cabañero for developing such an interesting initiative, which shows the active involvement of your educational community in the search for solutions and commitments to the climate emergency, sharing experiences with students and schools from other countries.

I understand very well the concerns of the young people in Tomelloso. The unprecedented and irreversible changes in the climate system are evident in all regions of the world, and scientists confirm that human influence has already warmed the atmosphere, the oceans and the land.

Therefore, I would like to express my support for the project and the activities, debates, workshops, and various actions that will help raise awareness of the serious problem that climate change represents for all citizens.

We in the Government are also concerned and are working to mitigate the effects of climate change and minimise the impact it already has on our country.

Following the approval of the Law on Climate Change and Energy Transition, which sets emission reduction targets to help Spain achieve climate neutrality by 2050 at the latest, we are making progress in the transformation of the energy system and the integration of adaptation policies in all sectors, particularly water and biodiversity.

These are just some of the lines of work that the Government has developed to address the climate emergency that requires urgent action by all to protect the environment, health and safety of citizens."

In Spain: <https://entomelloso.com/2023/tomelloso/la-vicepresidenta-teresa-ribera-felicita-al-ies-eladio-cabanero/463838/>

<http://www.cuadernosmanchegos.com/ciudad-real/educacion/teresa-ribera-vicepresidenta-tercera-del-gobierno-de-espana-y-ministra-de-transicion-ecologica-y-reto-demografico-felicito-ayer-por-carta-al-ies-eladio-cabanero-50995.html?fbclid=IwAR2Lh3IS5ENBvUc0PYOMKzVoJyGsO2g8Uqbs-c6RClUU3eclP2Of0z-juWSQ>

In Romania, on School's Facebook page:

https://www.facebook.com/photo/?fbid=10230177622441551&set=pcb.10230177629161719&locale=ro_RO

In Portugal, on School's webpage:

<https://www.escolasdesoure.pt/web/2023/05/roc-rangers-of-change/>

<https://www.facebook.com/AEMartinhoArias/posts/pfbid02DqypouesD3C8ddQmqPi85QUbCt2RtVdS74ZTauCgGKrBgH4mWP8pvtXvFTXM72Qpl>

In Lithuania, on School's webpage:

<https://www.graziskiai.vilkaviskis.lm.lt/453-vizitas-ispaijoje>

[https://www.graziskiai.vilkaviskis.lm.lt/459-roc-in-spain-april-23-28?](https://www.graziskiai.vilkaviskis.lm.lt/459-roc-in-spain-april-23-28?fbclid=IwAR059AamiQscDdp9dYdL_0d4FRfb8E3CRixCmmD3vIbju4RU2byjX5eveK8E)

[fbclid=IwAR059AamiQscDdp9dYdL_0d4FRfb8E3CRixCmmD3vIbju4RU2byjX5eveK8E](https://www.graziskiai.vilkaviskis.lm.lt/459-roc-in-spain-april-23-28?fbclid=IwAR059AamiQscDdp9dYdL_0d4FRfb8E3CRixCmmD3vIbju4RU2byjX5eveK8E)

on School's Facebook page:

<https://www.facebook.com/media/set/?vanity=GGTV.LT&set=a.715193750607650>

on Instagram:

<https://www.instagram.com/p/CrblpqhNOiI/?igshid=MzRlODBiNWFlZA==>

8.4 ROC MOBILITY IN GREECE;

In Lithuania:

[https://www.facebook.com/daiva.ssim/posts/](https://www.facebook.com/daiva.ssim/posts/pfbid0VvPMufeCyPi8yVGg88ZVhDo7E3n7ebtb5m9wVD3CkHnLpQk8hMibHJTvLqNUQsSzl)

[pfbid0VvPMufeCyPi8yVGg88ZVhDo7E3n7ebtb5m9wVD3CkHnLpQk8hMibHJTvLqNUQsSzl](https://www.facebook.com/daiva.ssim/posts/pfbid0VvPMufeCyPi8yVGg88ZVhDo7E3n7ebtb5m9wVD3CkHnLpQk8hMibHJTvLqNUQsSzl)

The article about ROC Mobility in Greece was also printed in the regional newspaper: <https://santaka.info/?sidx=71155&fbclid=IwAR1QyR96SK9Rm9QXSdfv19QXrB8ai835FBtkqWcIsl7YCbejASPxyBzpQaw> [https://www.facebook.com/story.php?](https://www.facebook.com/story.php?story_fbid=pfbid02eJVLjvnE2UGn8UUVfsLZR9WTo9Fo619chvSmEMVvNQtsPF6sCaaEQTQxSaT6xQPJcl&id=100063055639630&sfnsn=mo&paipv=0&eav=AfaWI3AfOfhy0pY1ixaBhQC8ylxMx9-1KRf1IM5rL_li1IrZMjaQ2g_r0MfqOVRvtaE&_rdr)

[story_fbid=pfbid02eJVLjvnE2UGn8UUVfsLZR9WTo9Fo619chvSmEMVvNQtsPF6sCaaEQTQxSaT6xQPJcl&id=100063055639630&sfnsn=mo&paipv=0&eav=AfaWI3AfOfhy0pY1ixaBhQC8ylxMx9-1KRf1IM5rL_li1IrZMjaQ2g_r0MfqOVRvtaE&_rdr](https://www.facebook.com/story.php?story_fbid=pfbid02eJVLjvnE2UGn8UUVfsLZR9WTo9Fo619chvSmEMVvNQtsPF6sCaaEQTQxSaT6xQPJcl&id=100063055639630&sfnsn=mo&paipv=0&eav=AfaWI3AfOfhy0pY1ixaBhQC8ylxMx9-1KRf1IM5rL_li1IrZMjaQ2g_r0MfqOVRvtaE&_rdr)

On School website: <https://graziskiai.vilkaviskis.lm.lt/informacija/projektai/erasmus/471-graikioje-ivyko-treciasis-erasmus-ka220-projekto-rangers-of-change-roc-pokyciu-iniciatoriai-partneriu-susitikimas-kuriame-dalyvavo-graziskiu-gimnazijos-ir-graziskiu-gimnazijos-bartninku-jono-basanaviciaus-skyriaus-mokiniai-beimokytojai>

On School Facebook page: <https://fb.watch/obiWwtuRoE/>

<https://www.bartninkai.lm.lt/2023/11/03/graikioje-ivyko-treciasis-erasmuska220-projekto-rangers-of-change-roc-pokyciu-iniciatoriai-partneriu-susitikimas-kuriame-dalyvavo-graziskiu-gimnazijos-ir-graziskiu-gimn/>

In Spain, on School's Facebook page:

[https://m.facebook.com/story.php?](https://m.facebook.com/story.php?story_fbid=pfbid02fynUIWdFuDHXitrhgSCJmCn759GUPjURQxbwSVvo97nxhyiwJC4L982mGLrdPWef3l&id=100051250339207)

[story_fbid=pfbid02fynUIWdFuDHXitrhgSCJmCn759GUPjURQxbwSVvo97nxhyiwJC4L982mGLrdPWef3l&id=100051250339207](https://m.facebook.com/story.php?story_fbid=pfbid02fynUIWdFuDHXitrhgSCJmCn759GUPjURQxbwSVvo97nxhyiwJC4L982mGLrdPWef3l&id=100051250339207)

[https://m.facebook.com/story.php?](https://m.facebook.com/story.php?story_fbid=pfbid02ba1oyfyiyGh9tofaxE2SG6ry3jAZWWXTCGssT4cCqadBMoMZA9fZb8mxPxrQuc5pl&id=100051250339207)

[story_fbid=pfbid02ba1oyfyiyGh9tofaxE2SG6ry3jAZWWXTCGssT4cCqadBMoMZA9fZb8mxPxrQuc5pl&id=100051250339207](https://m.facebook.com/story.php?story_fbid=pfbid02ba1oyfyiyGh9tofaxE2SG6ry3jAZWWXTCGssT4cCqadBMoMZA9fZb8mxPxrQuc5pl&id=100051250339207)

[https://m.facebook.com/story.php?](https://m.facebook.com/story.php?story_fbid=pfbid0temcFoXJaDn4kdhCKMK1pYCAxnkRAnViCvQaUuvLJN5UeGuhkVAyZzHv9gyT3M9fl&id=100051250339207)

[story_fbid=pfbid0temcFoXJaDn4kdhCKMK1pYCAxnkRAnViCvQaUuvLJN5UeGuhkVAyZzHv9gyT3M9fl&id=100051250339207](https://m.facebook.com/story.php?story_fbid=pfbid0temcFoXJaDn4kdhCKMK1pYCAxnkRAnViCvQaUuvLJN5UeGuhkVAyZzHv9gyT3M9fl&id=100051250339207)

[https://m.facebook.com/story.php?](https://m.facebook.com/story.php?story_fbid=pfbid02dQPHQ997N9toFfyrPXQDxAzq51MpsrZe4EX5MUJo4ZGoCHUNDGxmo5FTTr14SMDBZl&id=100051250339207)

[story_fbid=pfbid02dQPHQ997N9toFfyrPXQDxAzq51MpsrZe4EX5MUJo4ZGoCHUNDGxmo5FTTr14SMDBZl&id=100051250339207](https://m.facebook.com/story.php?story_fbid=pfbid02dQPHQ997N9toFfyrPXQDxAzq51MpsrZe4EX5MUJo4ZGoCHUNDGxmo5FTTr14SMDBZl&id=100051250339207)

In Romania, on School's Facebook page: https://www.facebook.com/photo/?fbid=307205752250714&set=pcb.307206155584007&locale=ro_RO

[fbid=307205752250714&set=pcb.307206155584007&locale=ro_RO](https://www.facebook.com/photo/?fbid=307205752250714&set=pcb.307206155584007&locale=ro_RO)

8.5 ROC MOBILITY IN PORTUGAL;

In Romania, on School's Facebook page:

https://www.facebook.com/photo/?fbid=385056124465676&set=pcb.385054554465833&locale=ro_RO

https://www.facebook.com/100063542801722/videos/3096467503820072?locale=ro_RO

On School's webpage: <https://scoala195.invatamantsector3.ro/proiect-erasmus-2024/>

In Lithuania, an article was published on Lithuanian Environmental schools website:

<https://gamtosauginesmokyklos.lt/graziskiu-gimnazijos-mokiniai-ir-mokytojai-portugalijoje/>

On School website:

<https://graziskiugimnazija.lt/?p=1051>

On School's Facebook page:

<https://fb.watch/qNJ1pgFbVl/>

<https://www.facebook.com/100003008213872/posts/7058307087612828/>

On Instagram:

<https://www.instagram.com/p/C30fF7NI6Bd/>

<https://www.instagram.com/p/C38QiCvI9zq/>

<https://www.instagram.com/p/C4AhtmvoPhp/>

8.6 ROC MOBILITY IN LITHUANIA;

In Greece: <https://www.instagram.com/erasmus2lyk/>

<https://www.facebook.com/share/p/QdfWt4uxK8fdNxXd/>

In Spain: <https://www.facebook.com/share/p/pEB9HhNYM9fsTg9i/>

https://www.instagram.com/p/C9-qulnMjVU/?utm_source=ig_web_copy_link

<https://x.com/Pilarn3Nieto/status/1817655991158419809>

In Romania, on School's Facebook page:

https://www.facebook.com/photo/?fbid=414540384850583&set=pcb.414539594850662&locale=ro_RO

In Lithuania, at Kardokai Nature School:

<https://www.facebook.com/kardokumokykla/posts/>

<https://www.facebook.com/kardokumokykla/posts/?fbid02oEtheq91muxUI99krjq42TEXCQRwSrfZZzkD1QUhoGFWRryX4phDvYSpyVn8ngJzl>

On Municipality Facebook page: <https://www.facebook.com/vilkaviskiosavivaldybe/posts/>

<https://www.facebook.com/vilkaviskiosavivaldybe/posts/?fbid0uw2WUeeQK1ZSuNTCe9bsaWMqGhAWYajWF5NQQnj5CBT1QCXeBbSigytViNbGoS2ul>

<https://www.bartninkai.lm.lt/2024/04/30/pokyciu-iniciatoriai/>

On School website: <https://graziskiugimnazija.lt/?p=1235>

8.7 ROC DISSEMINATION ON ACTIVITIES ACHIEVED IN EACH PARTNER SCHOOL:

https://www.facebook.com/photo/?fbid=319118651059424&set=pcb.319119511059338&locale=ro_RO

https://www.facebook.com/photo/?fbid=195481870089770&set=pcb.195482546756369&locale=ro_RO

<https://www.facebook.com/share/56xvou2ELNmtU5vc/>

<https://www.escolasdesoure.pt/web/2023/03/projeto-roc-poupanca-no-consumo-de-energia/>

<https://www.escolasdesoure.pt/web/2023/02/escola-secundaria-martinho-arias-recolha-de-lixo/>

<https://padlet.com/alexandrduarte/rangers-of-change-42w2cky2c2ynxxcv>



IN SPAIN, "RANGERS OF CHANGE" ON ONLINE MEDIA AND SCHOOL WEBPAGE:

entomelloso.com

Inauguradas dos exposiciones sobre el cambio climático en el IES Eladio Cabañero de Tomelloso

<https://entomelloso.com/2023/tomelloso/inauguradas-dos-exposiciones-sobre-el-cambio-climatico-en-el-ies-eladio-cabanero-de-tomelloso/437177/>

Alumnos del IES Eladio Cabañero de Tomelloso indagan en el cambio climático con el geógrafo Jacob Petrus

<https://entomelloso.com/2023/tomelloso/alumnos-del-ies-eladio-cabanero-de-tomelloso-indagan-en-el-cambio-climatico-con-el-geografo-jacob-petrus/439324/>

Alumnos y profesores del IES Eladio Cabañero de Tomelloso viajan a Rumanía con el proyecto Erasmus +

<https://entomelloso.com/2023/tomelloso/alumnos-y-profesores-del-ies-eladio-cabanero-de-tomelloso-viajan-a-rumania-con-el-proyecto-erasmus/439552/>

Profesores y alumnos de Portugal, Grecia, Lituania y Rumanía llegan al IES Eladio Cabañero de Tomelloso
<https://entomelloso.com/2023/tomelloso/profesores-y-alumnos-de-portugal-grecia-lituania-y-rumania-llegan-al-ies-eladio-cabanero-de-tomelloso/441400/>

Alumnas y profesoras del IES Eladio Cabañero defienden desde Grecia la lucha contra el cambio climático
<https://entomelloso.com/2023/tomelloso/alumnas-y-profesoras-del-ies-eladio-cabanero-defienden-desde-grecia-la-lucha-contr-el-cambio-climatico/462584/>

La Vicepresidenta Teresa Ribera felicita al IES Eladio Cabañero
<https://entomelloso.com/2023/tomelloso/la-vicepresidenta-teresa-ribera-felicita-al-ies-eladio-cabanero/463838/>

El IES Eladio Cabañero de Tomelloso entrega la ropa y juguetes recaudados a Cáritas, el 'Lorencete' y 'Dulcinea'
<https://entomelloso.com/2023/tomelloso/el-ies-eladio-cabanero-de-tomelloso-entrega-la-ropa-y-juguetes-recaudados-a-caritas-el-lorencete-y-dulcinea/465919/>

El IES Eladio Cabañero se suma a campañas solidarias en el marco del proyecto Erasmus + "Rangers of Change"
<https://entomelloso.com/2023/tomelloso/el-ies-eladio-cabanero-se-suma-a-campanas-solidarias-en-el-marco-del-proyecto-erasmus-rangers-of-change/457733/>

El proyecto «Rangers of Change», del IES Eladio Cabañero, presente en las jornadas medioambientales de C-LM
<https://entomelloso.com/2024/tomelloso/el-proyecto-rangers-of-change-del-ies-eladio-cabanero-presente-en-las-jornadas-medioambientales-de-c-lm/468830/>

News onlavozdetomelloso.com

El Eladio Cabañero muestra la importancia del Medio Ambiente con dos exposiciones
https://lavozdetomelloso.com/49013/eladio_cabanero_muestra_importancia_medio_ambiente_exposiciones

Jacob Petrus participa en una charla virtual en el Eladio Cabañero
https://lavozdetomelloso.com/49641/jacob_petrus_participa_charla_virtual_eladio_cabanero

Frenar el cambio climático, el objetivo del Eladio Cabañero en Tesalónica
https://lavozdetomelloso.com/53961/frenar_cambio_climatico_objetivo_eladio_cabanero_tesalonica

El Instituto Eladio Cabañero pone en marcha dos campañas de recogida de juguetes y ropa

<https://lavozdetomelloso.com/53580/>

instituto_eladio_cabanero_pone_marcha_campanas_recogida_juguetes_ropa

El Eladio Cabañero más solidario entrega el resultado de sus campañas de recogida de ropa

https://lavozdetomelloso.com/54986/eladio_cabanero_solidario_entrega_resultado_campanas_recogida_ropa

El proyecto "Rangers of Change" del Eladio Cabañero, en el II Encuentro de Educación Medioambiental de Castilla-La Mancha

<https://lavozdetomelloso.com/55705/>

proyecto_rangers_change_eladio_cabanero_encuentro_educacion_medioambiental_castillala_mancha

Newson lanzadigital.com

La vicepresidenta Teresa Ribera felicita al Instituto Eladio Cabañero

<https://www.lanzadigital.com/provincia/tomelloso/la-vicepresidenta-teresa-ribera-felicita-al-instituto-eladio-cabanero/>

lacerca.com

Llegan a Tomelloso los socios europeos del Erasmus + en el que participa el IES Eladio Cabañero

https://www.lacerca.com/noticias/castilla_la_mancha/llegan-tomelloso-socios-europeos-erasmus-ies-eladio-cabanero-662663-1.html

noticiastomelloso.com

Bienvenida calurosa a los miembros de Erasmus + para el proyecto «Rangers of Change» en el IES Eladio Cabañero de Tomelloso

https://noticiastomelloso.com/bienvenida-calurosa-a-los-miembros-de-erasmus-para-el-proyecto-rangers-of-change-en-el-ies-eladio-cabanero-de-tomelloso/#google_vignette

IES Eladio Cabañero webpage

Rangers of Change = Educación Medioambiental

<https://xn--ieseladiocabaero-jub.es/rangers-of-change-educacion-medioambiental/>

El IES Eladio Cabañero más solidario

<https://xn--ieseladiocabaero-jub.es/el-ies-eladio-cabanero-mas-solidario/>

Fundación CADISLA, protagonista de «Rangers of Change»

<https://xn--ieseladiocabaero-jub.es/fundacion-cadisla-protagonista-de-rangers-of-change/>

Energías renovables, energías del futuro

<https://xn--ieseladiocabaero-jub.es/energias-renovables-energias-del-futuro/>

Rangers of Change sigue con paso firme

<https://xn--ieseladiocabaero-jub.es/rangers-of-change-sigue-con-paso-firme/>

Activismo frente al Cambio Climático

<https://xn--ieseladiocabaero-jub.es/activismo-frente-al-cambio-climatico/>

Campaña solidaria de recogida de juguetes y ropa

<https://xn--ieseladiocabaero-jub.es/actua-cambia-las-cosas-compra-menos-recicla/>

Manifestación por el cambio

<https://xn--ieseladiocabaero-jub.es/manifestacion-por-el-cambio/>

Gymkana sobre la gestión de residuos

<https://xn--ieseladiocabaero-jub.es/gymkana-sobre-la-gestion-de-residuos/>

Semana intensa «Rangers of Change»

<https://xn--ieseladiocabaero-jub.es/semana-intensa-rangers-of-change/>

Arranca el encuentro «Rangers of Change» en Tomelloso

<https://xn--ieseladiocabaero-jub.es/arranca-el-encuentro-rangers-of-change-en-tomelloso/>

«Rangers of Change», primer encuentro

<https://xn--ieseladiocabaero-jub.es/20941-2/>

Las abejas y su importancia para el medio natural

<https://xn--ieseladiocabaero-jub.es/las-abejas-y-su-importancia-para-el-medio-natural/>

Algún día el árbol que has tronchado te hará falta para respirar

<https://xn--ieseladiocabaero-jub.es/algun-dia-el-arbol-que-has-tronchado-te-hara-falta-para-respirar/>

Exposiciones sobre el cambio climático en nuestro centro

<https://xn--ieseladiocabaero-jub.es/exposiciones-sobre-el-cambio-climatico-en-nuestro-centro/>

Debemos limpiar y conservar el entorno

<https://xn--ieseladiocabaero-jub.es/debemos-limpiar-y-conservar-el-entorno/>



IN GREECE, ON SCHOOL SITE :

<http://2lyk-el-kordel.thess.sch.gr/portal/index.php/2016-2017/erasmusfilakes/1117-erasmusroc>

Blogspot : <https://erasmus2lykllkor.blogspot.com/>

Instagram : <https://www.instagram.com/erasmus2lyk/>

Articles : <http://2lyk-el-kordel.thess.sch.gr/portal/index.php/2016-2017/erasmusfilakes/1138-erasmusfiloksenia>
<http://2lyk-el-kordel.thess.sch.gr/portal/index.php/2016-2017/erasmusfilakes/1077-erasmus2023>

IN LITHUANIA

<https://www.graziskiai.vilkaviskis.lm.lt/informacija/projektai/erasmus/435-dar-vienas-erasmus-ka220-projektas-rangers-of-change-roc-pokyciu-iniciatoriai-2>

<https://www.graziskiai.vilkaviskis.lm.lt/informacija/projektai/erasmus/450-rangers-of-change-roc-pokyciu-iniciatoriai-2023-03-27-32>

https://www.graziskiai.vilkaviskis.lm.lt/458-roc-in-romania-march-26-31?fbclid=IwAR0VnQIAHmZpDY3HNbC6Vo0QW0-bzFwvsJq6N79DzyZq_wX3E6fYeo28WrU

<https://www.facebook.com/media/set/?vanity=GGTV.LT&set=a.692379732889052>

<https://www.facebook.com/LTembassyRO/posts/pfbid02WiB4HVtu6YmGsC2NdsxiREHJS4BtkubWaBkDNfarGtJvV1rky1weZk9F7uFBsnr6l>

<https://www.facebook.com/LTembassyRO/posts/pfbid02WiB4HVtu6YmGsC2NdsxiREHJS4BtkubWaBkDNfarGtJvV1rky1weZk9F7uFBsnr6l>

<https://www.graziskiai.vilkaviskis.lm.lt/453-vizitas-ispnijoje>

https://www.graziskiai.vilkaviskis.lm.lt/459-roc-in-spain-april-23-28?fbclid=IwAR059AmiQscDdp9dYdI_0d4FRfb8E3CRixCmmD3v1bju4RU2byJX5eveK8E

<https://www.facebook.com/media/set/?vanity=GGTV.LT&set=a.715193750607650>

<https://www.instagram.com/p/CrblpqhNOiI/?igshid=MzRlODBiNWFlZA==>

<https://www.facebook.com/daiva.ssim/posts/pfbid0VvPMufeCyPi8yVGg88ZVhDo7E3n7ebtb5m9wVD3CkHnLpQk8hMibHJTvLqNUQsSzl>

<https://www.facebook.com/GGTV.LT/posts/pfbid02Kss6ehwbNdDaAPNsGVVHPRVZqrWvEdasq49ENnV4nAMeQFGXyMnUMz26w7t3YGK4l>

<https://www.facebook.com/photo/?fbid=307243115580311&set=pcb.307243748913581>

<https://www.facebook.com/photo/?fbid=307239722247317&set=a.105160752455216>

<https://graziskiai.vilkaviskis.lm.lt/informacija/projektai/erasmus/471-graikioje-ivyko-treciasis-erasmus-ka220-projekto-rangers-of-change-roc-pokyiciu-iniciatoriai-partneriu-susitikimas-kuriame-dalyvavo-graziskiu-gimnazijos-ir-graziskiu-gimnazijos-bartninku-jono-basanaviciaus-skyriaus-mokiniai-bei-mokytojai>

<https://www.bartninkai.lm.lt/2023/11/03/graikioje-ivyko-treciasis-erasmuska220-projekto-rangers-of-change-roc-pokyiciu-iniciatoriai-partneriu-susitikimas-kuriame-dalyvavo-graziskiu-gimnazijos-ir-graziskiu-gimn/>

<https://fb.watch/obiWwtuRoE/>

<https://santaka.info/?sidx=71155&fbclid=IwAR1QyR96SK9Rm9QXSdfv19QXrB8ai835FBtkqWcIsl7YCbejASPxyBzpQaw>

https://www.facebook.com/story.php?story_fbid=pfbid02eJVLJvnE2UGn8UUVfsLZR9WTo9Fo619chvSmEMVvNQtsPF6sCaaEQTQxSaT6xQPJcl&id=100063055639630&sfnsn=mo&paipv=0&eav=AfaWI3AfOfhy0pY1ixaBhQC8yIxm9-1KRf1IM5rL_liIirZMjaQ2g_r0MfqOVRvtaE&_rdr

<https://www.facebook.com/photo/?fbid=307242975580325&set=pcb.307243748913581>

<https://www.facebook.com/photo/?fbid=307239722247317&set=a.105160752455216>



IN PORTUGAL:

<https://www.escolasdesoure.pt/web/2023/10/feira-de-trocas-no-aemas/>

<https://www.escolasdesoure.pt/web/2023/12/projeto-roc-poupanca-no-consumo-de-energia-2/>

<https://www.escolasdesoure.pt/web/2024/02/projeto-roc-erasmus-1o-dia-de-mobilidade/>

<https://www.escolasdesoure.pt/web/2024/03/projeto-roc-mobilidade-no-aemas/>

<https://www.escolasdesoure.pt/web/2023/11/aemas-em-salonica/>

<https://www.escolasdesoure.pt/web/2023/10/o-aemas-a-caminhar-pelo-ambiente/>

<https://www.coimbra.pt/2024/02/estudantes-do-programa-erasmus-recebidos-na-cm-de-coimbra/>

8.8 ROC DISSEMINATION AT INTERNATIONAL EVENTS;

- Bonn Erasmus+ conference «Schools go green and digital» in Bonn (Germany) - May 3rd-5th 2023:

<https://www.yumpu.com/en/document/read/67944307/programmheft-greendigital-final>

https://www.facebook.com/1143743259/videos/pcb.10230224481172990/231192996195065?locale=ro_RO

- International teacher development courses and international community of practice-TAP-TS Spring School in Nicosia, Cyprus- April 2024:

https://www.facebook.com/photo?fbid=414245541546734&set=pcb.414245918213363&locale=ro_RO

- The European Erasmus+ "Youth Informatics Seminar" in Tipperary, Ireland- Oct 2023:

https://www.facebook.com/photo/?fbid=307185255586097&set=pcb.307183055586317&locale=ro_RO

- At Eden Project ,Cornwall, England- July 2023:

https://www.facebook.com/photo/?fbid=282704344700855&set=pcb.282704711367485&locale=ro_RO



ERASMUS RANGERS OF CHANGE

GALLERY DISSEMINATION



CUPRINS

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ȘCOALA GIMNAZIALĂ NR. 195



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ISSN 2066 - 3463



Sebastian Moraru - 8 O

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DESENE COPERTĂ

1 - Alexandru Lazăr (6 J), 2 - Sofia Popescu (5 G),
3 - Dimitri Stamanichi (5 G), 4 - Carina Suhățeanu (5 F)



UNIVERS 195

**REVISTA ȘCOLII GIMNAZIALE
NR. 195, BUCUREȘTI**





Rangers Of Change

EVENT ROMANIA

Our Erasmus+ Project "Rangers Of Change" has started its 1st mobility of Work Package No 2- "Climate change and extreme weather".

Our students welcomed their colleagues from partner schools in



27TH -31ST MARCH 2023

proved YOU are the Change we all wish to see in the world!

On Monday, 27th March 2023 teachers & students from Greece, Lithuania, Portugal and Spain were welcome at School No 195, in Bucharest, Romania.



Greece, Lithuania, Portugal and Spain with traditional dances from each participant country, including Romania.

We were honored to be visited by His Excellency, Mr. Donatas Augulis, from the Embassy of Lithuania and Her Excellency Mrs. Katerina Makrogiannaki, representing the Embassy of Greece.

Special thanks for a marvelous ceremony to our students, teachers and parents! Students, guided by their teachers and supported by parents made this day unforgettable! Congrats, children, you



Roc-Romania-Event-Day1-03 (2/4)



School presentation, greetings were followed by working activities on project issues; workshops dealt with waste management, material recovery, promoting & facilitating longer lifespan of material re-use, recycling, litter reduction campaigns to prevent leakage into the environment. Good, relevant arguments and solutions were found by the participants. Our common activities increased students' capacity in helping slow climate change at The Museum of the National Bank of Romania - we

talked about valuable numismatic collections, interesting stories about the national heritage; the golden vault; students connected past history and

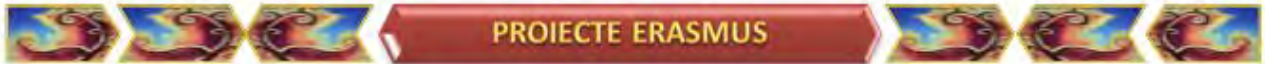
testimonials to present and future; identifying and tracking actions, participants learnt how to slow climate change.

Day 2 Erasmus+project "Rangers Of Change"-Cleaner beaches on the Black Sea coast-WE are the change! On Tuesday, 28th March, teachers & students' departed to Constanta & The Black Sea where they organized the Project workshop-there participants achieved direct observations & collecting data; developing specific outcomes, elements, results of our project campaign "I have got green fingers". Participants worked

To Constanta & The Black Sea



on project goals face to face; discussed all the project issues, sharing, defining responsibilities, preparing a plan about impact measurement.



Day 3 Erasmus+project "Rangers Of Change"- dissemination of project at a TV station and during our meeting with a senator at the Romanian Parliament.

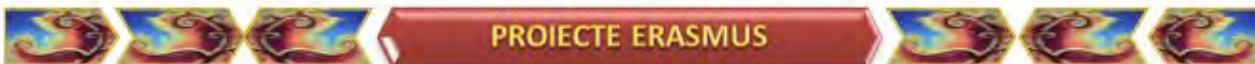
On Wednesday, 29th March school teams had workshops on ROC activities to implement ROC project; techniques of dissemination materials involving students, local community-they organized a meeting at Digi24 TV channel Teachers & students took part to activities at The Parliament House. They met a Romanian senator and debated on causes of climate change; raising awareness about climate change;



developments which made our lives easier, pleasant, but affected our planet in a negative way; disseminating "ROC" project results.

Day 4 Erasmus+project "Rangers Of Chang"-participants mitigated for cleaner forests, as WE are the GREEN change! Students from all partner schools and their teachers cleaned the forest from Bran Castle and shared environmental education strategies with the mayor of Bran. Teachers & students' departed to The Carpathian forests & Dracula's Castle -Project workshop focused on





direct observations & collecting data; identifying relevant needs for green education; "Cleaner forests on our outskirts" campaign. They discussed impact of weather changes globally and on all participant countries; identifying fuel-efficient transportation methods.

Day 5 Erasmus+Project "Rangers Of Change" Students from all partner schools, coordinated by their teachers, have successfully contributed to the planting of more than 3 billion trees! On Friday, 31st March, school teams took part to workshop on ROC activities to implement ROC project; ; coordinator awarded certificates; "Plant a tree to feel free" campaign involved students, local community, teachers and it proved to be a great socializing activity.



Roc-Romania-Event-Day5-04 (1/4)

ROC students disseminated our Erasmus+project at the Embassy of Lithuania, honoured by the invitation of His Excellency, Mr Donatas Augulis.

- Erik Vlad-8K**
- Alessia Stăncuțu 8A**
- Daria Giușcă 8E**
- Maria Cîrstea 8B**
- Mihai Gheorghe 8B**
- Daria Preoteasa 8A**
- Ioana Cristescu 7A**
- Ana Ghimeș 7A**
- Iustin Pârvu 8I**
- Eduard Flisc 8F**



At the Embassy of Lithuania

Roc-Romania-Event-Day5-03 (3/4)

MICII ECOLOGIȘTI

ÎNCĂLZIREA GLOBALĂ

Ce este încălzirea globală? Încălzirea globală este cauza pentru care mulți pinguini își pierd casele și mor, pentru care gheața pe care trăiesc urșii polari se topește, pentru care tigrii nu mai au habitate naturale, pentru care bambusul nu mai crește, urșii panda sunt în pericol și multe alte catastrofe la adresa animalelor.

De ce există încălzirea globală? Ea există din cauza oamenilor, pentru că ei au ars combustibili fosili găsiți în pământ, ceea ce a dus la creșterea nivelului de gaze care, la rândul lor, au dus

dar putem încetini acest proces prin scăderea arderii combustibililor. De exemplu, putem încerca să folosim mașinile mai puțin, putem înlo-



cui un bec normal cu unul cu led, putem încerca să reciclăm mai mult sau să fim mai economi cu apa. Împreună, orice schimbare mică devine mai mare, una câte una.

Miruna Constantin - clasa a VI-a C

*Peste etapele străluc
clasa - clasa a VI-a C*

la efectul de seră și captează căldura în atmosfera Pământului. Căldura nu mai iese din atmosferă, ceea ce duce la creșterea temperaturii medii de pe Terra.

Putem opri încălzirea globală? Da, putem. Deși nu putem să dăm timpul înapoi și să oprim începutul acestui fenomen, putem să împiedicăm din a se mai întâmpla. Nu se va opri peste noapte,



MICII ECOLOGIȘTI

SĂPTĂMÂNA
VERDE

Săptămâna a-nceput,
Cu un dans bine făcut!
Clasa noastră a dansat,
Pentru greci ne-am bucurat,
Căci pe ei i-am reprezentat!



Apoi am fugit în clasă,
Prin filmulețe am învățat lucruri de bază,
Ceea ce am făcut și marți!
Marți doamna a zis: „Creați!”
Și-am creat noi felurite
Multe la târg renumite!



Joi în parc am mers,
La picnic cu ceai și citit,
Plin de râsete și chicotit!
Și apoi o doamnă a venit,
Și noi am făcut un curs
Iar eu am scris un vers
Cum un copac să protejiez!

Miercuri totul a continuat,
Cu un atelier evoluat!
Alături de o altă clasă,
Am învățat să protejăm a noastră casă!
Și am stat mult în natură,
Ca-n cărți de literatură!

Iar vineri târgul a venit,
Și oamenii au venit de cum am clipit!
Eu am și făcut vânzare,
Dar și mare cumpărare!



Prieteni mi-am și făcut,
Lucruri noi am învățat,
Lângă natură am stat,
Noi toți am evoluat,
De „Săptămâna Verde”
Nu mai vreau să mă despart!

Carina Pavel - clasa a VI-a C

MICII ECOLOGIȘTI

SONDAJE PE TEMA RRR
(REDUCERE, RECICLARE, REUTILIZARE)

Cu ocazia activității de ecologizare a parcului „Alexandru Ioan Cuza” s-au realizat sondaje de opinie cu tema „Reducere, Reciclare, Reutilizare”. Datele obținute au fost înregistrate și organizate în tabele, apoi s-au realizat diagramele în Excel.

ECO Sondaj Echipa: Yanisa Pană, Alina Vlad, Matei Hetriuc, Iulian Marin - 8 B

| OBICEIURI SUSTENABILE | Număr persoane intervievate | | | | | | | | | | | | Nr răspunsuri afirmative |
|--------------------------------------------------------------------|-----------------------------|---|---|---|---|---|---|---|---|----|----|----|--------------------------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | |
| 1 Plantez copaci | X | X | V | V | X | V | X | V | X | V | X | V | 6 |
| 2 Petrec mult timp în natură | V | X | V | V | V | V | V | V | V | V | V | V | 11 |
| 3 Merg cu bicicleta / pe jos | V | V | V | V | V | V | V | V | X | V | V | X | 10 |
| 4 Fac dușuri scurte | V | X | V | V | V | V | V | X | X | V | X | V | 8 |
| 5 Sting lumina când nu sunt în cameră | V | V | V | V | V | V | V | X | V | V | V | V | 11 |
| 6 Utilizez becuri economice | V | X | V | V | V | V | V | X | V | V | V | X | 9 |
| 7 Am aparate electrocasnice cu eficiență energetică mare (clasă A) | V | X | V | V | X | X | V | V | V | V | V | V | 9 |
| 8 Colectez separat hârtie, sticlă, plastic pentru reciclare | V | X | V | X | V | V | X | V | V | V | X | X | 7 |
| 9 Folosesc sticle și borcane reutilizabile | V | V | X | V | X | X | X | X | V | V | V | V | 7 |
| 10 Evit risipa alimentară | V | V | X | V | V | V | V | V | V | V | V | V | 11 |
| 11 Folosesc sacoșe de pânză | X | V | V | V | X | V | V | X | V | X | V | X | 7 |
| 12 Nu folosesc tacâmuri și pahare de plastic | X | X | X | X | X | X | X | X | V | V | V | V | 4 |
| 13 Cumpăr de la producătorii locali | V | X | V | X | V | V | V | V | X | X | X | X | 6 |
| 14 Repar obiectele care nu mai funcționează | V | X | V | V | V | V | V | X | V | X | V | X | 8 |
| 15 Donez obiectele de care nu mai am nevoie | V | V | V | V | V | V | V | V | V | V | V | X | 11 |

Notă: V = DA; X = NU

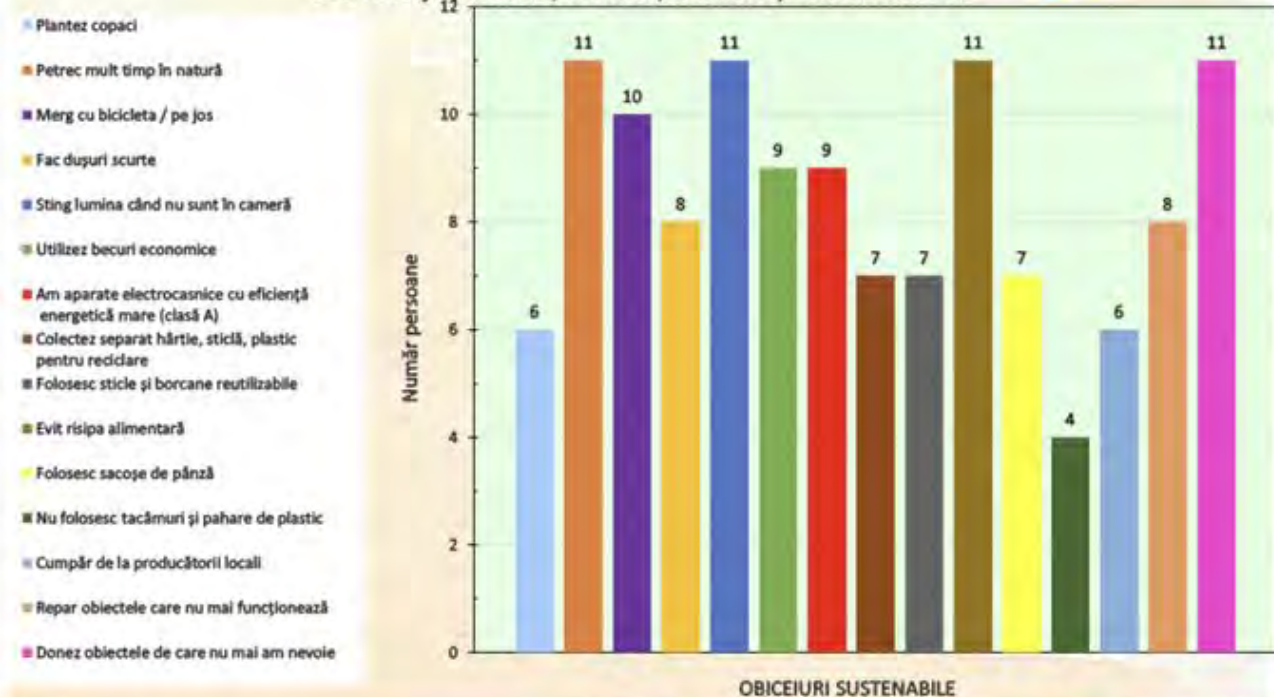


Ecologizare în parcul „Alexandru Ioan Cuza”



Echipa: Eduard Găină, Mircea Anghel, Darius Budin, Șerban Ilie - 8 B

ECO Sondaj - (Reducere, Reciclare, Reutilizare) - Parcul A. I. Cuza



MICII ECOLOGIȘTI

SAM, EROUL
INVENTATOR

Într-o lume nu prea diferită de a noastră, într-un timp îndepărtat, exista un oraș cunoscut sub numele de Cleantropolis. Acesta era diferit de orice alt oraș, pentru că se afla în interiorul unui gard masiv care se întindea cât de departe puteai vedea cu ochii. Dincolo de gard, era o vastă întindere de gunoaie și moloz, munți de plastic și orice fel de deșeuri.

Orașul Cleantropolis era condus de un primar pe nume Dutin Greedmore, un bărbat al cărui nume se potrivea perfect cu caracterul său, singura lui motivație fiind banii. Le promitea cetățenilor orașului că tot gunoiul lor se reciclează. Mai mult gunoi însemna mai multe taxe și mai mulți bani în buzunarul acestuia.

În difuzoarele orașului, se auzeau toată ziua lozinci care îl laudau pe primar: „Trăiască primarul Greedmore, curățătorul orașului!"; „Cleantropolis, o viață fără griji"; „O viață frumoasă e o viață fără gunoi!"

În mijlocul acestui peisaj, era un grup de copii curioși de ceea ce se afla dincolo de zid. Aceștia își doreau din ce în ce mai mult să exploreze lumea de dincolo. Grupului de copii i s-a alăturat și un băiat pe nume Sam. Acesta era foarte deștept și era pasionat de invenții. Familia lui nu plătea gunoiul, deoarece reușise să inventeze o mașinărie care transforma plastic și orice tip de gunoi în produse ce se puteau utiliza. Micul inventator o denumise Reciclatorul.

Acești tineri activiști au început să organizeze proteste pașnice în parcuri, străzi și în fața primăriei. Copiii au desenat bannere și au strigat sloganuri care au atras atenția cetățenilor și mass-mediei.



Protestele lor i-au inspirat și pe părinții care doreau o schimbare, dar mai ales, doreau să scape de taxele enorme.

Deși primarul Greedmore li s-a opus, aceștia, împreună cu părinții lor au reușit să spargă zidul ce despărțea orașul de ... Surpriză!... nu era deloc ceea ce se așteptau.

„Ce... ce este acolo?!”

„Acestea sunt gunoaiele noastre?!”

„Nu pot să cred, ne-ai păcălit în tot acest timp?!”

Cu toții au realizat că, de fapt, primarul nu reciclase nimic, ci doar depozitase gunoiul în spatele marelui zid.

În mijlocul acestui dezastru, singura lor salvare era acum Reciclatorul, mașinăria inventată de micul inventator Sam. Astfel, Sam devenise eroul orașului.

Sara Goran - clasa a III-a J

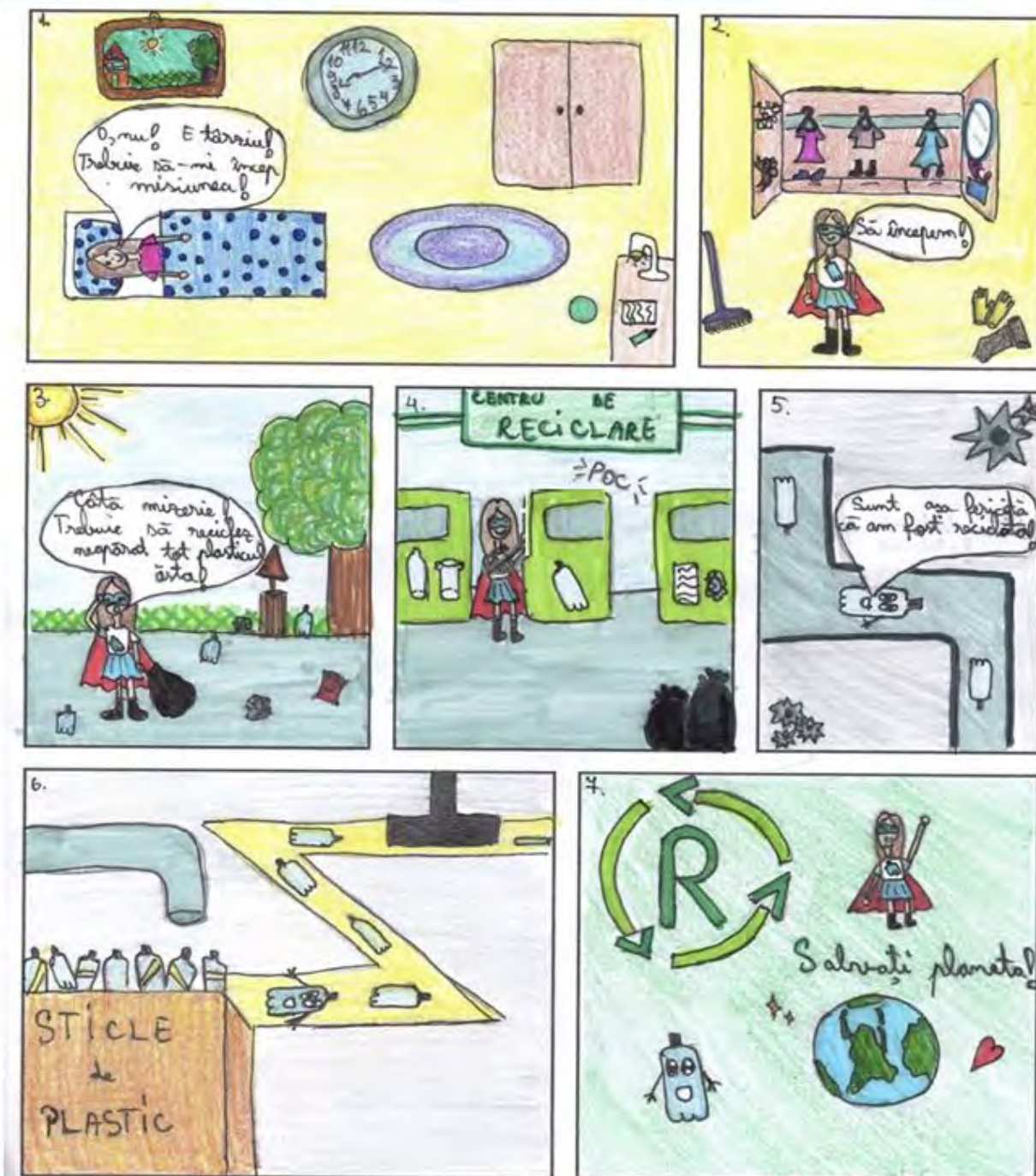


SĂ RECICLĂM!

Fetița-Erou, prietena materialelor reciclabile, este pregătită să-și înceapă misiunea și astăzi. Pornește, așadar, în căutarea tuturor peturilor din cartierul său și reușește să facă sticlele ferice, reciclându-le și oferindu-le șansa către o nouă viață. Cu toate că are o vârstă fragedă,

protagonista eroină decide să ia soarta plasticului în propriile mâini, deoarece consideră că doar astfel putem prețui planeta, valorificând orice ocazie de a readuce la viață orice material reciclabil, de la cea mai mică sticlă, până la cea mai mare.

Antonia Curicheriu - clasa a V-a D





CUPRINS

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Prof. MONICA CORBUȘ

DESENE COPERTĂ

1 - Carina Suhățeanu (5 F), 2 - Luca Ionașcu (7 C),
 3 - Miruna Săpașu (7 G), 4 - Ruxandra Metehău (5 G)





**Co-funded by
the European Union**

RANGER OF CHANGE

ROC ("Rangers Of Change") Erasmus+ project is about environment and fight against climate change, increasing students' capacity in helping slow climate change by conserving energy, minimizing vehicle use, eating locally grown foods, recycling. Students will be taught to reduce greenhouse gas pollution at home, at school; save energy, reduce pollution, remove carbon dioxide; help stop global warming.

Our project aims inclusion and diversity in all fields of education, training, youth and sport, planting trees at school, in public spaces; improving teenagers' mental and emotional well-being



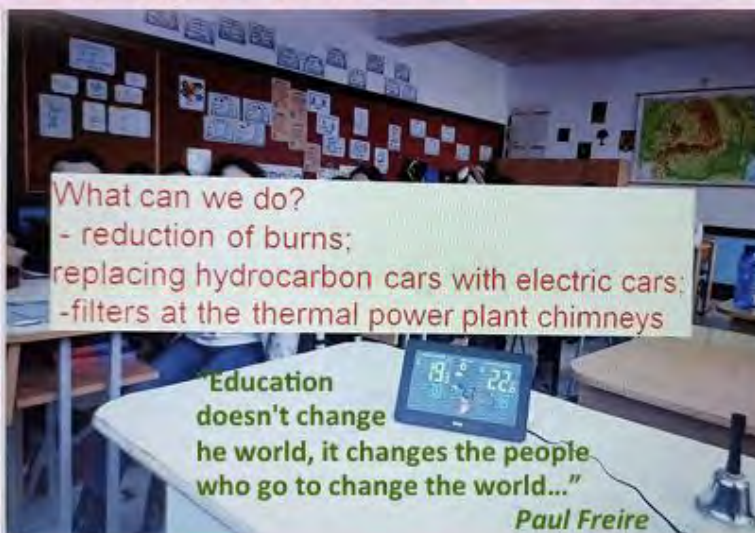
organizing clean air activities - "Freeze Green Dance"; "Mountain Climbers"; "Hug and talk to trees".

Topics addressed by ROC project:

- A. Environment and climate change
- B. Green skills
- C. Disaster prevention, preparedness and recovery

Climate change & extreme weather

- ROC true stories, written by students, about unusual places for extreme weather phenomena that occurred in participating countries; about impact of extreme weather on the world and on all participating countries; about how weather conditions affect life on the planet and in all participating countries; about farming/agriculture/famine/ clear water scarcity/ endangered animals/ disease/microbes/ migration of people and animals.





56 students participate in this project. We are all concerned about major climate changes, changes produced by human activities.

As a conclusion: It is necessary to reduce all emissions in the atmosphere if we want to give the planet TERRA another chance.

We are the Rangers Of Change!

Why calculate the ecological footprint?

Figuring out the size of our ecological footprint will help us to know that we are responsible for our planet moving towards sustainability or towards disaster. It will allow us to discover what we can do in our daily lives to create a more sustainable society... and why we should do it.





- ROC Diary-Charts - calculation of our carbon footprint. Following their calculation, students identified what we could do to neutralize our emissions/ carbon footprint.
Footprint Calculator - Measure your Impact - Global Footprint Network.

How to calculate your ecological footprint?

In order to calculate our ecological footprint, we will use this online calculator:

<http://www.tuhuellaecologica.org/> , <https://footprint.wwf.org.uk/#/>

You will have to collect a series of personal data and fill in these charts regarding your household energy consumption, water consumption, transport costs and the amount of waste you generate.



| Heating |
|-----------------------------------------------------------------|
| How many hours do you have the heating on per day? |
| How many radiators do you turn on per day? |
| If you have hot/cold air, how many hours do you use it per day? |

| Lighting |
|---------------------------------------------------|
| How many hours do you have the lights on per day? |
| How many lights do you turn on per day? |

| Household appliances |
|-----------------------------------------------------------------|
| How many hours a day is the TV on? |
| How many hours a day do you use the computer? |
| How many hours a day do you charge your mobile phone or tablet? |
| How many times do you cook in the house per day? |
| How many cookers do you turn on per day? |
| How often do you use the oven? |
| How often do you use the dishwasher? |
| How often do you use the washing machine? |
| Do you use any other appliances on a regular basis? |

| Transport |
|----------------------------------------------------------------------------------------|
| Journeys by car. |
| If you use the car to go shopping, how often do you go shopping for basic necessities? |
| Number of short-distance trips, outside your town. |
| Number of long-distance trips, outside your country. |

PROIECTE ERASMUS

| |
|--------------------------------------------------------------------------------------------------------|
| Water Consumption |
| How many times a day do you flush the toilet? |
| How many minutes do you spend in the shower? |
| Indicate the number of times you take a bath in the bathtub. |
| How many times do you brush your teeth a day? |
| How many times do you wash your hands or face daily? |
| Dishwasher. I use short cycle washes. |
| Dishwasher. I use long cycle washes. |
| I wash the dishes by hand and leave the tap running throughout the process. |
| Washing machine. I use short cycle washes. |
| Washing machine. I use long cycle washes. |
| Hot Water |
| Number of times you use hot water when you wash the dishes, use the washing machine or the dishwasher. |
| How many times do you use the shower and how long does it take? |

| |
|-------------------------------------------------------------------------|
| Waste and Materials |
| How often are leaflets, magazines or newspapers delivered to your home? |
| How much packaged food do you consume? |
| How many bags of organic waste do you put in the bin? |
| How much glass do you put in the bin? |
| How much paper/ cardboard do you put in the bin? |
| Do you recycle other types of waste? |

- Erik Vlad-8K*
- Alessia Stăncuțu 8A*
- Daria Giușcă 8E*
- Maria Cîrstea 8B*
- Mihai Gheorghe 8B*
- Daria Preoteasa 8A*
- Ioana Cristescu 7A*
- Ana Ghimeș 7A*
- Iustin Pârnu 8I*
- Eduard Flisc 8F*



Results

In my family we consume a total of 1460 kep of energy and 365 kep per day. Our economic cost is of 2191 euros.

Our total water consumption in litres in one year is of 91743. The difference between my consumption and the average consumption is of 31743. The percentage above the population average is of 153%.

My consumption of my journeys is of 1425 kep. Distance travelled is 25351 km. Cost per 100 km is of 6 kep.

Waste generated per day is of 1.2 kg. And the difference of waste is of 104,1%.

- * Organic material 64%.
- * Paper 6% Glass
- * Glass 45%
- * Plastics 9% Metals
- * Metals 3% Bricks
- * Bricks 3% Others
- * Rest of them 11%

How can you reduce your carbon footprint?

I think I can reduce my carbon footprint by recycling more seriously, because I don't recycle much and I think that's the main problem I need to change. Using less light, saving more water (when I take a shower or brush my teeth) and recycling more.

I think we should all recycle more to save the world and the environment.

Maria Valentin





Results

Journeys: 113 kep / Distance: 4073 km / Round the world: 0.08 / fuel: 4 kep / Waste per day: 1 kg / Difference to average person: 109.6 percent

Natural gas: 720 € / Electricity: 220 € / litres per year 68246 L

Difference with average consumption (L): +8246 L (114 percent)

How can you reduce your carbon footprint?

I think I should reduce my water consumption and reduce the amount of waste I produce to reduce my carbon footprint. But in general, I don't think I'm a very polluting person.

Guillermo Castellanos Rubio

Results

My energy test is 7689kep per year, 24% over the average.

My water test result is 49187L per year, 82% over the average.

My transportation test result is 117847kep per year, 67% over the average.

I recycle 1,1kg per day, 95.5% over the average.

How can you reduce your carbon footprint?

I think my family and I should reduce our energy consumption by cutting down on the use of appliances we don't need.

We should also use less water. We shouldn't wash the dishes before we use the dishwasher.

In terms of transport, I should walk to school more often.

In terms of waste and recycling, we always recycle, 95.5% above the average.

Cătălina

Results

Regarding my energy survey, my total cost is 1798.36 euros and the global calculation of energy is a total of 1909 kep (637 kep per person).

Regarding the water survey, I've used 89213 litres this year. My percentage above the average is about 149%. And if everyone had the same habits as me, they would use 192 Hm³.

In the transport survey, I've used a total of 550 kep. I've travelled a distance of 14946 km and my average fuel consumption per 100 km is about 4 kep.

Regarding the waste survey, I've produced 1'4 waste products per day. The percentages represent

- Organic matter: 47%
- Paper and cardboard: 13%
- Glass: 8%
- Plastics: 11%
- Other: 12%



How can you reduce your carbon footprint?

I think I need to reduce the amount of energy I waste because the price is very high. Also, it would be better if I used solar energy.

I know that I've wasted a lot of water this year. I need to waste less water and reduce my percentage above the average. I also need to use public transport or my bike to get to places to reduce emissions.

I also have to recycle things like paint and some paper.

Lydia



Results

Energy: Per person: 237 kep (270 average), in my home: 947 kep (1078 average).

Water: 98726 litres (38726 litres over the average)

Transport: 4 kep/100km 20546 km per year.

Waste: 93.3 %

How can you reduce your carbon footprint?

I think I'm pretty strict with my energy consumption because I don't use the same amount of energy as the rest of the people. With water consumption I am not very happy because now I can see that I use a lot of water every day and that is very bad for the planet, I think I could spend less time in the shower or turn off the tap while brushing my teeth.

Talking about transport, I am very happy because almost all the time I walk instead of using the car, so that is a good action for the planet.

With all the waste, I personally think that in my home we reduce and recycle the waste, so we produce less waste than other people.

Alex

Results

In my family we use 873 keps a year, which is around 800 euros, so we're below the average.

As far as water consumption is concerned, we use more than 488000 litres a year, which is the Spanish average.

In terms of transport, we consume 449 keps and travel around 12,900 kilometres.

Finally, in my house we produce more than 1 kg of waste per person! So we produce 1400 kg of waste a year.

How can you reduce your carbon footprint?

From my point of view, I reckon I could reduce my footprint by becoming an eco-friendly person who lives in an eco-friendly way of life.

For example going by foot instead of by car to my activities, consuming organic food and reducing packaged food. Moreover, I could turn off the lights when I'm not using them and also closing de sink every time I'm not using the water.

Of course, I could start recycling glass, apart from plastic and paper; as recycling is one of the most important contributions we can do to help the environment and our planet.

To sum up, I believe everyone should take care of environment by doing simple things as the things aid before. Besides, an other important fact is not to throw waste as we must not produce pollution.

Carmen



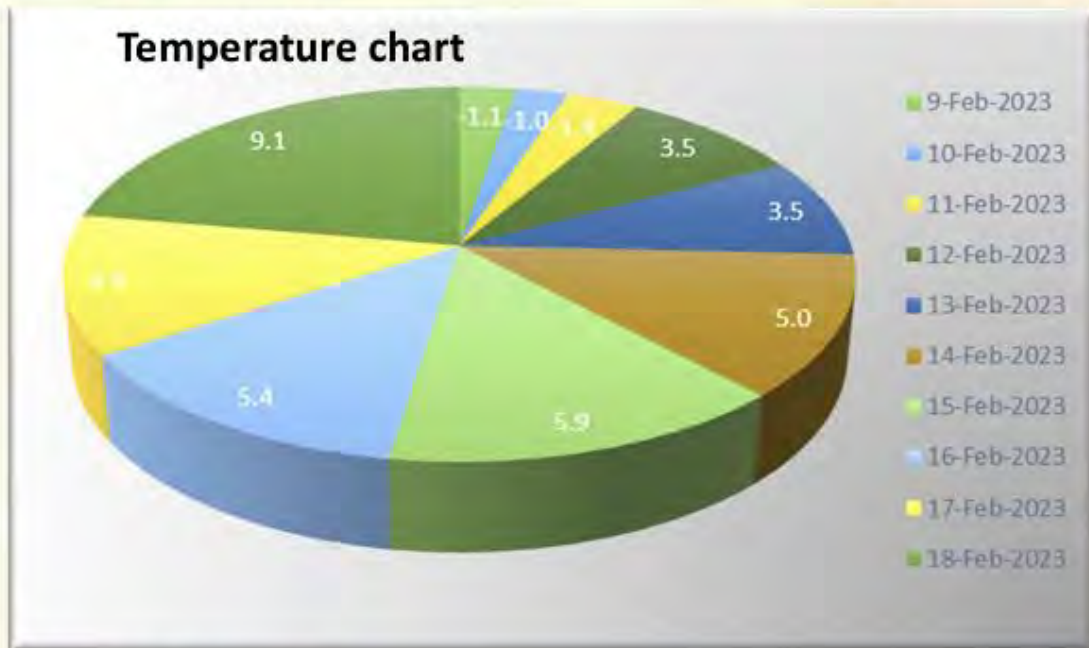


- ROC "Weather station at my school"- students became scientists, keeping a diary of temperatures, weather conditions and cloud types that they saw above their school over the course of 2 weeks, comparing results.

Weather station at my school

| Date | Hour | Temperature (°C) | Sky state | Wind direction | Precipitation |
|------------|-------------|------------------|----------------|----------------|---------------|
| 09-02-2023 | 11:00:00 AM | -1.1 | 20%-30% cloudy | E-N-E | 0 |
| 10-02-2023 | 11:00:00 AM | -1.0 | 0 | V-S-V | 0 |
| 11-02-2023 | 11:00:00 AM | -1.4 | 0 | V-S-V | 0 |
| 12-02-2023 | 11:00:00 AM | 3.5 | 50% | V-S-V | 0 |
| 13-02-2023 | 11:00:00 AM | 3.5 | 0 | S-S-V | 0 |
| 14-02-2023 | 11:00:00 AM | 5.0 | 0 | S-S-V | 0 |
| 15-02-2023 | 11:00:00 AM | 5.9 | 0 | S-V | 0 |
| 16-02-2023 | 11:00:00 AM | 5.4 | 0 | S-V | 0 |
| 17-02-2023 | 11:00:00 AM | 4.9 | 0 | S-V | 0 |
| 18-02-2023 | 11:00:00 AM | 9.1 | 50% | V-S-V | 0 |

| MAX 2023 | MIN 2023 | AVERAGE February 2023 | Multiannual monthly average (meteorological station Bucharest - Filaret) | Max 2016 (meteorological station Bucharest - Filaret) | Min 1929 (meteorological station Bucharest - Filaret) |
|----------|----------|-----------------------|--------------------------------------------------------------------------|-------------------------------------------------------|-------------------------------------------------------|
| 9.1 °C | -1.4 °C | 3.38 °C | 1.2 °C | 25.7 °C | -24.2 °C |



Alexia Oprea—8 B

WEATHER STATION AT MY SCHOOL FEBRUARY 2023

| DAY | TIME | SKY STATE | TEMPERATURE | WIND DIRECTION | RAINFALL |
|---------------------------|-------|-------------------|-------------|----------------|----------|
| 9 TH FEBRUARY | 12:00 | CLOUDLESS | -1°C | N-E | 0 |
| 10 TH FEBRUARY | 12:00 | MOSTLY CLOUDY | 0°C | S-V | 0 |
| 11 TH FEBRUARY | 12:00 | CLOUDY | 1°C | S-V | 0 |
| 12 TH FEBRUARY | 12:00 | MOSTLY SUNNY | 4°C | S-V | 0 |
| 13 TH FEBRUARY | 12:00 | SUNNY | 6°C | S-V | 0 |
| 14 TH FEBRUARY | 12:00 | CLOUDLESS | 7°C | S-V | 0 |
| 15 TH FEBRUARY | 12:00 | MOSTLY SUNNY | 8°C | S-V | 0 |
| 16 TH FEBRUARY | 12:00 | SUNNY | 8°C | S-V | 0 |
| 17 TH FEBRUARY | 12:00 | SUNNY WITH CLOUDS | 9°C | S-V | 0 |
| 18 TH FEBRUARY | 12:00 | SUNNY | 11°C | S-V | 0 |



The comparison of the lowest and the highest temperatures:

-the lowest: $-1^{\circ}\text{C} > -24,2^{\circ}\text{C}$ (min in 1929 at the meteorological station Bucharest - Filaret)

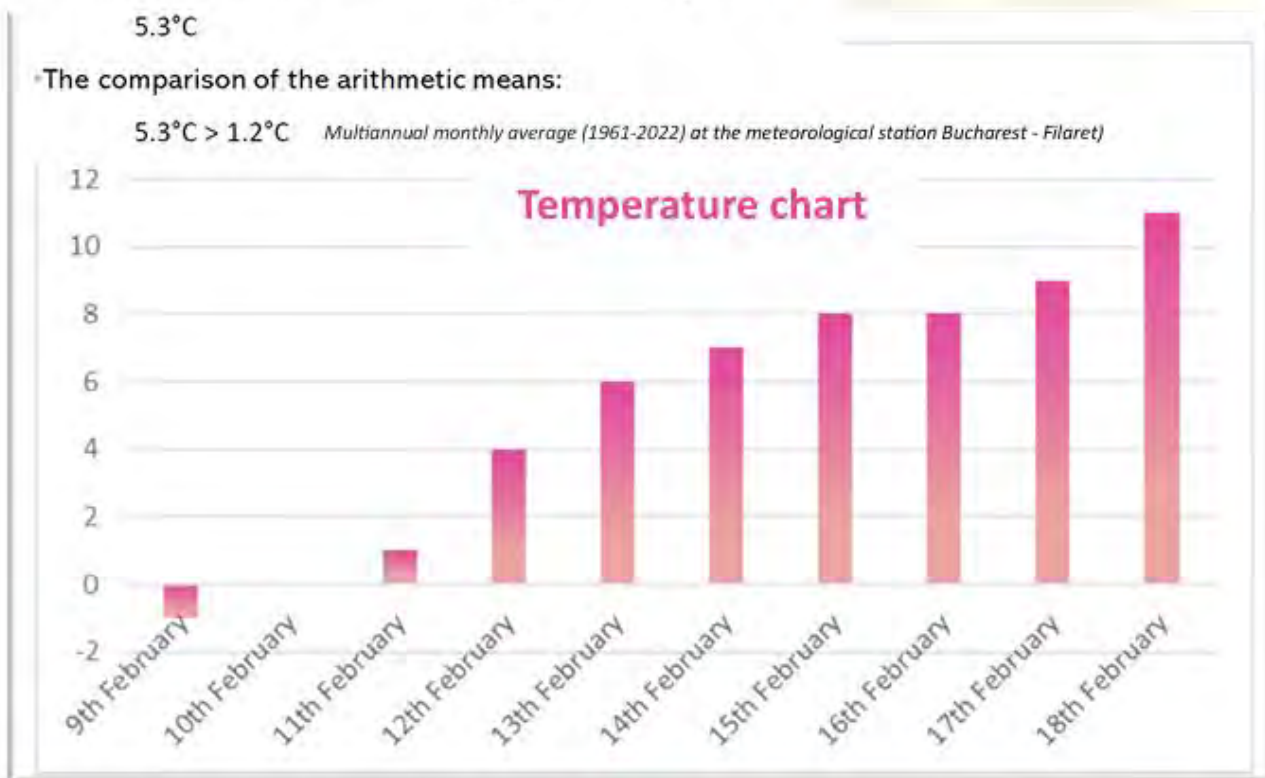
-the highest: $11^{\circ}\text{C} < 25,7^{\circ}\text{C}$ (max in 2016 at the meteorological station Bucharest - Filaret)

The arithmetic mean for these ten days of February 2023:

5.3°C

The comparison of the arithmetic means:

5.3°C > 1.2°C Multiannual monthly average (1961-2022) at the meteorological station Bucharest - Filaret



| Nr.crt. | Anul | Temperatura medie lunară (°C) |
|---------|------------|-------------------------------|
| 1 | 2016 | 4,9 |
| 2 | 2002 | 4,2 |
| 3 | 1966 | 3,7 |
| 4 | 1977 | 3,4 |
| 5 | 1995 | 3,3 |
| 6 | 2020 | 3,1 |
| 7 | 1990 | 2,7 |
| 8 | 2022 | 2,3 |
| 9 | 2007 | 2,1 |
| 10 | 1974, 2014 | 1,9 |

Table 3 — The top of the years with the warmest February months in Romania, from the period 1961-2022

Maria Cîrstea – 8 B

According to table 3, I can say that February 2023 is one of the warmest Februaries from 1961 to 2023.

Based on these ten days, it turns out February 2023 was a dry month.

In conclusion, February 2023 was a sunny month, perfect for going on walks and spending more time outside.

MICII ECOLOGIȘTI

Impresii din „Săptămâna Verde”

În „Săptămâna Verde” am avut parte de niște experiențe incitante, care ne-au ajutat să conștientizăm importanța naturii, care ne înconjoară la orice pas.



Un eveniment care mi-a plăcut foarte mult a fost „Târgul Primăverii”. Acolo am vândut obiecte din materiale reciclate, pentru a reduce poluarea. Eu am vândut broșe făcute din capace de metal.

Plimbându-mă, am observat că elevii din târg au avut idei creative, unele chiar m-au pus pe gânduri.

Acestea fiind spuse, cred că „Săptămâna Verde” a

fost cu adevărat folositoare, ajutându-ne să ne dăm seama ce impact avem noi asupra mediului înconjurător.

Daria Sophia Frînaru - clasa a VI-a K

Pentru mine, cea mai interesantă și atractivă activitate a fost vizita la Fabrica de sticlă BA. În sediul fabricii se află o cameră cu o temperatură ridicată, unde sticla ajunge la forma ei inițială, după un circuit robotizat cu multe funcțiuni.

În fabrică puteai intra doar dacă purtai echipament special și dopuri de urechi, deoarece în acel sediu era o mare gălăgie. Acolo am văzut mai multe lucruri despre sticlă: cum e preparată, cum e răcită, cum e depozitată și, în final, cum e transportată către alți producători. A fost o experiență plăcută și mai diferită!

Nicholas Presmeanu - clasa a VI-a K



În „Săptămâna Verde” am învățat practic să îngrijim și să înfrumusețăm mediul înconjurător.

Curățarea parcului a fost cel mai bun exemplu prin care s-a învățat că trebuie protejat mediul. Iar plantarea arbuștilor de magnolii ne face să fim responsabili cu îngrijirea lor. Dacă îi îngrijim, înseamnă că ne gândim la viitor, la generațiile care vor urma și care au nevoie de oxigen, dar și de frumusețe.

MICII ECOLOGIȘTI

Avem nevoie de activități practice. Ador „Săptămâna Verde”!

Dan Cristian Ionescu-Baciu – clasa a VI-a K

Prima dată în viața mea de elev
Am avut activități în cadrul „Săptămânii Verzi”
Alături de colegi și de dirigintă,
Săptămâna a fost nemaipomenită!

Prima dată pe oaspeți i-am întâmpinat
Cu pâine și cu sare i-am îndemnat,
Din țări foarte îndepărtate veniți,
De prestațiile noastre au fost uimiți.

A doua zi după fabrica specială
Ne-am întors la școală,
Unde cu clasa 6C, în paralel,
Am făcut activități fel de fel.

Și în ultima zi, din păcate,
Am avut un târg ca la carte
Unde s-au confecționat lucruri minunate
Din materiale reciclate.

Spre finalul zilei, în curtea școlii
Am plantat niște magnolii
Care vor rămâne încântătoare,

O amintire nemuritoare.



Vizita la fabrica de sticlă
A fost o mare surpriză utilă,
Cum se face sticla am învățat
Și totodată ne-am pus pe reciclat.

*Eva Bunduc
clasa
a VI - a K*



Fabrica de sticlă BA



MICII ECOLOGIȘTI

AVEM NEVOIE DE PĂDURE, PĂDUREA ARE NEVOIE DE NOI!

În a doua zi din „Săptămâna Verde” am participat împreună cu „Asociația Principele Nicolae” la proiectul „Codrii de mâine” pentru a planta stejari. Cei care au organizat activitatea ne-au arătat cât de adânc să săpăm groapa, cum să punem rădăcinile puiețului în așa fel



încât să nu fie strâmb sau să aibă rădăcinile la suprafață, cum să astupăm și să bătătorim. Pentru a săpa groapa puteam alege dintre lopată și cazma, iar acestea erau la dimensiuni perfecte atât pentru noi, cât și pentru cei mici. După ce am terminat activitatea, ne-au oferit turtă dulce bio și sucuri cu vitamine. Am plantat aproximativ 2 hectare de stejari.

Antonia Tohănean-Dobre - clasa a VIII-a B

Într-o zi destul de înnorată am fost să plantăm stejari, corcoduși și mesteceni în „Ocolul Silvic Brănești”. Cu toate că era destul de înnorat, am fost norocoși că nu a plouat torențial, doar a plouat puțin, iar apa de la ploaie



ne-a ajutat să săpăm gropile pentru puieți. M-am simțit foarte bine că am participat la o astfel de activitate, deoarece am ajutat planeta.

Răzvan Giuroiu

Am participat împreună cu colegii la plantat de copăcei în Brănești. Ne-am strâns câte 6 copii formând o echipă, și ne-am ajutat între noi pentru a ne

perfecționa stilul de lucru în grup și pentru că fiecare era bun la câte ceva. Împreună am reușit să plantăm peste 100 de copăcei, ceea ce ne-a făcut să plecăm de acolo fericiți de munca depusă și lăsând ceva frumos în urma noastră.

Daria Arhip - clasa a VIII-a B

MICII ECOLOGIȘTI

Când am ajuns la terenul unde trebuia să plantăm copaci, instructorii ne-au pus să ne grupăm în perechi de câte doi și să luăm o lopată pentru echipă. Apoi ne-au explicat cum să săpăm, de unde să luăm puieti și... ne-am apucat de treabă. A fost distractiv și am lucrat cu toții în echipă, ajutându-ne unii pe alții.



Diana Elena Loghin - clasa a VIII-a B

La acțiunea de plantat copaci la Brănești la care am participat, a fost și Principele Nicolae. Organizatorii ne-au adus cazmale pentru a săpa gropi în care să punem puietii și ne-au tratat cu apă, suc și

turtă dulce. Ne-am distrat mult acolo și cred că am făcut o treabă bună.

Paula Bănceanu - clasa a VIII-a B

Am plantat peste 150 de puieti pe 2 hectare de pământ. A plouat puțin, deci pământul era moale, dar asta nu înseamnă că nu era greu de plantat. La un moment dat, noi am găsit un sistem mai eficient și anume, unii copii făceau gropi, iar alții veneau din spate și plantau puietii. A mers foarte rapid, dar pantofii tuturor erau înnămoliți până la glezne după ce am terminat.

Andrei Ghețu - clasa a VIII-a B

Într-o zi din „Săptămâna Verde” am mers în zona Brănești, din județul Ilfov ca să plantăm puieti de diferite feluri (cum ar fi cel de stejar) într-o zonă de poiană. De unde ne-a lăsat autocarul, a trebuit să mergem pe jos 2 kilometri până la poiană. Drumul de 2 kilometri zici că era făcut din mai multe straturi: unul de copaci cu flori albe, altul de copaci înverziți, altul cu papură, până când am ajuns în locul de plantat. Împreună cu Sandu am plantat în jur de zece puieti, însă diferența este că noi i-am stabilizat cu mult mai multă grijă, Sandu știind mult mai multe decât mine despre plantat. Majoritatea copacilor pe care i-am plantat au fost stejari. După vreo două ore, cred, activitatea s-a terminat. Am învățat astăzi tehnicile prin care se plantează un copac, ce este, mai exact, o buruiiană și multe altele.

Andrei Lupu - clasa a VIII-a B



La Ocolul Silvic Brănești mi-a plăcut experiența inedită de a planta copaci alături de Principele Nicolae. Vremea a fost ploioasă, dar pădurea ne-a surprins prin peisajele frumoase!

Yanisa Pană - clasa a VIII-a B

JURNAL DE CĂLĂTORIE

O EXPERIENȚĂ DE NEUITAT

În prima zi din „Săptămâna Verde”, i-am primit călduros pe invitații proiectului Erasmus, veniți din Grecia, Spania, Lituania și Portugalia. În jur de ora 10, aceștia au sosit la școală, unde au fost întâmpinați de participanții proiectului Erasmus din România, cât și de alți copii din școală, care le-au oferit un fel de mâncare tradițional românesc și anume pâine delicioasă cu sare.

I-am condus pe invitați în sala de festivități, unde copiii din școala noastră au pregătit numeroase surprize, dansuri specifice țărilor participante și o paradă a modei cu ținute făcute din materiale reciclate.

După terminarea festivității, le-am oferit copiilor un tur al școlii. În jur de ora 13 am plecat spre Centrul Vechi al Bucureștiului, unde le-am prezentat invitaților câteva dintre cele mai frumoase atracții de acolo, printre care, Hanul lui Manuc, Biserica Sfântul Anton, Cafeneaua Van Gogh, Universitatea și Banca Națională.

A doua zi din „Săptămâna Verde” a fost preferata mea. Am plecat în excursie la Constanța, alături de invitații noștri, cât și de mulți alți copii din școală.

Am ajuns pe plajă în jur de ora 12. Le-am oferit invitaților mai multe tipuri de prăjituri tradiționale. Aceștia au fost

foarte încântați și au zis că mâncarea din România este delicioasă.



În cele din urmă, ne-am apucat de strânsul gunoaierilor de pe plajă. Am fost foarte fericiți atunci când am văzut că nu sunt așa multe de strâns și că plaja era destul de curată. Am mai petrecut timp pe plajă și am făcut poze, am vorbit cu cei din alte țări, ne-am plimbat pe malul mării și am admirat priveliștea.

După activitatea de pe plajă, ni s-a făcut foame și am plecat spre restaurant. Mâncarea a fost delicioasă! Am făcut poze pe terasa restaurantului în tricourile Erasmus+ ROC pe care le am primit cu toții, iar apoi ne-am urcat în autocar și ne-am întors la București.

În a treia zi din „Săptămâna Verde” am vizitat sediul celor de la Digi 24, unde am avut ocazia să vedem cum se produce o emisiune TV, ba chiar să ne punem în locul



JURNAL DE CĂLĂTORIE



producătorilor și prezentatorilor. Totodată, am asistat la înregistrarea unei emisiuni despre salvarea planetei, pe care am putut să o urmărim la televizor în următoarea săptămână.

În jur de ora 12 am ple-

cat spre restaurant, unul cu specific grecesc, unde am putut încerca numeroase feluri de mâncare și unde am avut ocazia să vorbim mai mult cu cei din țările partenere.

Am plecat de la restaurant și ne-am grăbit către Palatul Parlamentului. A fost o vizită de neuitat, deoarece toată lumea a rămas surprinsă de cât de mare era și cât de frumos era amenajat în interior. Am vizitat numeroase camere din Parlament și am făcut foarte multe poze.

În a patra zi din „Săptămâna Verde” am plecat în cea de a doua excursie, la Bran. Am ajuns acolo destul de devreme și am avut mult timp să vizităm tot ce ne-am dorit. Am început cu vizitarea castelului Bran. Invitații noștri au fost

foarte încântați de arhitectura castelului, cât și de priveliștea de la etaj sau din grădina acestuia. După ce am terminat vizita, am mers să vedem suvenirurile, de unde toți am cumpărat câte ceva. Tot acolo, cine a vrut a putut intra la

„Castelul Groazei”. A fost foarte amuzant și deși ne-am speriat destul de rău, ne-a plăcut foarte mult!

În cele din urmă, am ajutat la strânsul gunoaielor într-o pădure din apropiere, iar apoi am mers să mâncăm. Ultima noastră vizită a fost la Castelul Peleş. Vremea a fost perfectă pentru activitățile noastre și ne-am distrat de minune!

În ultima zi din „Săptămâna Verde” am avut festivitatea de încheiere a proiectului. Fiecare țară a pregătit o prezentare în care ne au arătat obiceiurile și tradițiile lor, mâncărurile tradiționale și ne-au povestit câteva lucruri despre școlile pe care aveam să le vizitam în viitor. Fiecare participant a fost premiat și a primit un cadou din partea școlii noastre. Colegii din celelalte țări ne-au oferit niște cadouri făcute de ei, din materiale reciclate.

În cele din urmă, i-am condus pe copii în curtea din spatele școlii, unde am ajutat la plantat copaci și am făcut multe poze de grup.

Tot ce am făcut în această săptămână mi-a plăcut nespuse de mult și a fost o experiență de neuitat!

Maria Cîrstea - clasa a VIII-a B



AVENTURA CUNOAȘTERII

VIZITĂ
LA ANM

ADMINISTRAȚIA NAȚIONALĂ DE METEOROLOGIE

La „Administrația Națională de Meteorologie” (ANM), specialiștii ne-au prezentat diverse aparate, spre exemplu pluviometrul, girueta sau heliograful, aparatul care măsoară cât timp strălucește soarele pe cer. În interior putem găsi fel de fel de aparate, unele mai avansate decât altele. La acele aparate lucrează trei meteorologi în ture și sunt prezenți 24 din 24 de ore, pentru a aduna informații de pe radar și satelit și a le transmite în întreaga țară.

Antonia Tohănean-Dobre - clasa a VIII-a B



La stația meteo, doamnele ne-au explicat despre diferite instrumente, de exemplu: anemometru (pentru măsurarea vitezei vântului), heliograf (pentru măsurarea intensității luminii soarelui), rigla nivometrică (pentru măsurarea înălțimii stratului de zăpadă) și cum funcționează. În sala radarelor ne-au arătat pentru ce sunt folosite diferite hărți.

Diana Elena Loghin - clasa a VIII-a B




Călătorind cu autocarul de la „Visuri la cheie”,

ne-am împlinit unul din „visurile” pentru „Săptămâna Verde” și anume, vizita la Administrația Națională de Meteorologie. Odată ajunși acolo, o doamnă ne-a explicat cum funcționează toate dispozitivele de la stația meteo, care măsoară nu doar temperatura, dar și viteza, direcția vântului, umiditatea și radiațiile solare.

Mihai Ghețu - clasa a VIII-a B




AVENTURA CUNOAȘTERII

La stația meteo unde am aflat cum se măsoară precipitațiile, viteza vânturilor și temperatura cu diverse mecanisme de diferite forme. În afară de măsurarea diverselor elemente meteorologice am mers și în sala unde sunt afișate toate hărțile despre vreme pe care mi le-aș putea imagina. Acolo sunt puse în aplicare toate informațiile. De fapt, am găsit și pe site-ul oficial al meteorologiei române aceleași hărți. Astăzi am aflat, printre altele, cum ne afectează presiunea aerului viețile de zi cu zi, cum arată un radar meteo etc.

Andrei Lupu — clasa a VIII-a B



Vizitând una din stațiile meteorologice ale ANM, am putut vedea locul de unde se extrag informații și am observat complexul mecanism ce furnizează datele pentru prognoza meteo. De asemenea, am văzut radarele performante ale respectivului centru.

Sandu Necșoiu - clasa a VIII-a B

Cu ocazia acestei vizite am învățat lucruri noi despre cum se fac măsurătorile pentru prognoza meteo, pe care o vedem acasă, la știri. Am aflat și cum se determină, relativ, vremea din următoarele zile.

Vlad Moraru - clasa a VIII-a B

La Stația meteorologică Băneasa, ne-au întâmpinat două doamne, (una dintre ele, o fostă elevă a școlii noastre) care ne-au îndrumat către o grădină cu aparate folosite pentru preluarea datelor. Acolo se aflau diferite aparate, precum: pluviometrul care măsoară cantitățile de precipitații căzute pe metrul pătrat și girueta automată care indică intensitatea și direcția vântului.

Răzvan Giuroiu - clasa a VIII-a B

La ANM am putut vedea cum se determină vremea prin stațiile meteorologice și sateliții din spațiu și cum ajung toate informațiile despre vremea de azi și din următoarele zile la știri, la radio, pe mobile etc. Mă bucur că am avut de învățat din această experiență și sper să revin și cu altă ocazie!

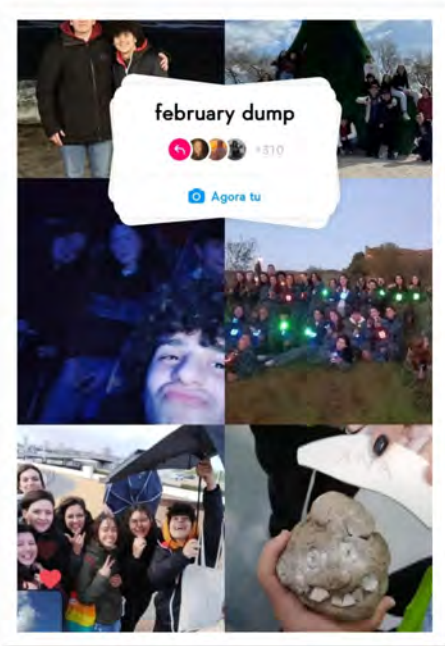
Daria Arhip - clasa a VIII-a B



Vizita la ANM mi s-a părut deosebit de interesantă. Aparaturile mi se par fascinante. Sunt de părere că felul în care se lucrează pentru a ne da temperaturile zilnice și starea vremii este impresionant. Sigur de acum o să apreciez mai mult oamenii care lucrează în acest domeniu de admirat.

Andrei Șmuleac - clasa a VIII-a B





Biografia

Portugal

detalhes

destaques

Ver todas as fotos



Agrupamento de Escolas Martinho Árias - Soure
Publicado por Cristina Reivas · 2 d ·

No âmbito do projeto Rangers of Change, enquadrado no program pela docente Alexandra Duarte, decorreu a quarta mobilidade, ago 26 de fevereiro e 1 de março. Este encontro multicultural e plurilinguistas, provenientes de escolas dos países parceiros: Espanha, imbuídos do mesmo espírito de proteção do planeta, através de b são exemplos as diversas iniciativas desenvolvidas pelos alunos da sinalética para a poupança de energia e feira das Trocas, entre outr projeto supracitado, os alunos estrangeiros, recebidos calorosa e g nossos alunos, tiveram a oportunidade de mergulhar no universo e acompanhar os colegas nalgumas atividades letivas e ao confratern de cultura. Com o objetivo de consciencializar para a preservação c foram os locais selecionados percorridos pela comitiva ROC, desde plantaram simbolicamente árvores, à Ersuc, em Vil de Matos e à Eco fábricas de grés mais sustentável do mundo. Em Aveiro, todos os p projeto navegaram nas águas da laguna da Foz do Vouga, vulgo Ri Salgado da Ria de Aveiro, no qual seguiram a Rota Birdwatching, a Aveiro Ria Tours & Birdwatching. Ao longo do trajeto, subiram o Ca para a entrada de embarcações para o antigo Porto Comercial) par algumas aves (corvos marinhos, garças, gaivotas) e os palheiros on suas alfaias. Simultaneamente, ouviram-se histórias / estónias sobre abandono das salinas, o tratamento/a faina do bacalhau. Por fim, f do processo de produção de ostras da empresa Ostraveiro, a partir água, atividade que culminou na degustação de ovos moles, doce' As iniciativas culturais estiveram também presentes nesta jornada l Coimbra, concretamente à Europe Direct, à Universidade de Coim cidade.

O vasto e diversificado programa, que teve início com a receção, er representantes máximos da escola e da Câmara Municipal, e pela c culminou com grande animação e festa inclusiva, pois "Ensinar e A] A todos quanto participaram nesta aventura ecológica e internacio em particular à Câmara Municipal de Soure que tornou possível a c ao mais alto nível.



MEU 97% 11:46

„Friends! <3” February 29

Erasmus!

This was the best week of my life... Thank you so much... <3

I love ya'll... <333

Activity Browse Create Share to More



11:24

„Friends/palces” February 29

Quem Betleões - Comer Comer

#Portugal #ROC #Erasmus+

Captura do ecrã guardada na Galeria.

Activity Browse Create Share to More



11:24

„Friends/palces” February 29

Isto correu bem 🥰

#ROC #Erasmus+

Activity Browse Create Share to More



MEU 97% 11:46

„Friends! <3” February 29

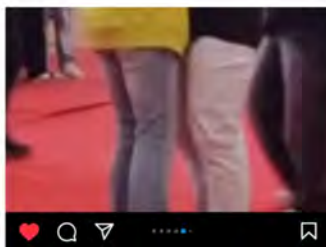
The Strokes · You Only Live Once

Erasmus!!!:D

Activity Browse Create Share to More



Gostos: luis_jn09 e 20 outras pessoas



„Santaka“ galėsite skaityti ir internete – www.santaka.info

7

2024 m. kovo 22 d. Santaka

„Ir jūsų valioje, ar smerkti, ar pasigailėti“

NUOMONĖS

Kuris laikas viešumoje aktyviai pasisakoma dėl poetės Salomėjos Nėries vardu pavadintų objektų: palikti jiems senąjį vardą ar pakeisti kitu? Diskusijų pagrindas – faktai, kad S. Nėris buvo delegacijoje, vykusioje į Maskvą pasirašyti Lietuvos tariamo stojimo į SSRS sutarties, kad parašė „Poemą apie Staliną“. Mūsų kraštas – poetės gimtinė, dėl to Vilkaviškyje turime ir Salomėjos Nėries vardu pavadintą mokyklą, ir gatvę, per „Poezijos pavasario“ festivalį teikiama Salomėjos Nėries literatūrinė premija. Tad natūralu, kad vilkaviškičiai nelieka svarstymų dėl S. Nėries vertinimo ir atminimo jamzinimo nuosaldėje. Vieni savo poziciją išsako elėmės, kiti – įrašais socialiniame tinkle „Facebook“, kur vis sukunkuliuoja diskusijos.

Paskaitykite, ką jaučia ir galvoja žmonės, neabejingi S. Nėries poezijai ir gyvenimui. O gal kils noras išsakyti ir savąją poziciją?

Buvau juk tik žmogum...

Vilija SAKALAUSKIENĖ

Pavasarinis vėjas klaidžioja arimųs,
Tik jo daino be žlugusio gėdai.
Upelė mano, Sirvinto, ir tu nurimusi
Lyg motina išėjusi vaikų būdai.

Zvalgais, ar besugrįši jie pro palaukę
Ir pašvėit prigius prie mylimo peties,
Bet užsirašinę tik debesys pilkėję plaukio
Skačiuoti nuodėmių monos lemtes.

Rasutė: „Upė šaltuosė, mano Sirvinto /
Rudenio lapelių mirga priberta.“ Aš užaugau
ir gyvenau prie Sirvinto. Daugelį eilėraščių dar ir dabar moku atmintinai. Be nuodėmės nė vienas nesam, bet poete buvo nuostabi. Kiek „Poezijos pavasarių“ vykę jos teisiėje, tai gal palikim viską taip, kaip yra.“

Elytė: „Nereikia naikinti mūsų lakstingalos vardo. Aš gyvenau jos vardu pavadintoje gatvėje, ir man patinka.“

Bronius: „Mano kaimynė buvo, keistoka, bet talentinga.“

Mindaugas: „O kad iškilį poetė S. Nėris kažkuriais politikai yra nepriimti-

Pakrantėj tavo klausė pasakų vaikystė,
Liepsna, žibibus žodžių gėlių manyje,
Bet aš tikrai žmogus, diejo, galu ir klysti,
Be pėdsakų sudegti laiko ugnyje.“

Naktis beveik gąubias juodą skara,
O ji lyg švino klodai širdį vėlei spaus,
Gal kovoje su sovimi aš pralaimėjau karą –
Trimitai priešą pergalingai gaus.

Gal iš tikrųjų ir norėjau „atsivėžti saulę“,
Tik ar tikėjau tau, ar svajones supečiau,
O gal suraizgė lyg voratinklį apgaule,
Kad iš lakstingalos kolaborante patūpau,

na, tegu neskaityt jos kūrybos. Manau, daugeliui lietuvių jos daugelis eilėraščių labai patinka, ir manyčiau, kad greitai šalyje atsiras tokio išskirtinio talento ir lygio poetė. Turėkime blaivaus proto ir mąstymo, nepasiduokime politikų psichozėi.“

Nerijus: „Visi tautos išdavikai ir kolaborantai turi būti savo vietoj ir kuo toliau nuo mūsų valstybės ir atminties! Kad ir puiki poetė buvo, bet ji pardavė mūsų tėvynę, ir tai yra faktas! Niekas neneigia jos lakstingališkumo, tačiau nereikia kurti pasakų apie tai, kad 1940-aisiais blogi dėdės suklaidino mūsų naivų lakstūtę,

Ir poststėbini šlardienai jau ne laikas,
Istorijos ir atminties gyvos neįstatyt...
Bemaž po šimtmečio pavijo šitas tvokos,
Dabar kalbėkit jus, o man – tikrai klausyt.

Ant plėnės pūka lediškas margų drugėlių,
Užtūm šarėdama valvorykėtė barštas,
Zvelgti, kas eina tuo seniai pažįstamu kėlu,
Sikšbrq Paukščių tako saujomis žurntas

Ir skrenda pasrai iš tenai nebylus,
Nektisubėta liko tik viena giesmė,
Ir spengiančioj erdvėj lyg žingsniai tykūs...
Atsirašau! Tik ar yra prasmė?..

Gal išpirkau kaltes per žemiškąjį kėničią,
Galbūt galėjus fakstancūšs iš kartų,
Kai išsileido vertė kūną skausmo parčiai,
Tik sąžinė ir aš sustojame prie Dievo vartų.

Kas kart pavasarį aš dlemedūi pražyduis
Jaučiu, kaip tiesas pirštai provietis kaulėti.
Buvau lakstingala, tik laikmečiu ne tuo
pražyduis
ir jūsų valioje, ar smerkti, ar pasigailėti.

Norėjau dar pasisvečiuoti, bet dienų neliko,
Ir tuoj pranykusi užmaršty sprangioj.
Nėra mano! Ką užrašė, kas po manęs lika,
Lakstūtė tegul suvokia tėvishęj brangioj.

O aš ramiai miegoti tenorėčiau
Po vaiskai mėlynu taikū dangum,
Ar ką pakėstūčiau, jeigu dar gyvenimą
turėčiau?
Tikriausiai ne... Buvau juk tik žmogum...

1940-aisiais ji buvo visiškai brandi ir suramėjusi bolševikė, su beveik 10 metų komunistinės veiklos stažu.“

Astas: „Nejau mes „atsirinkime“ tik tai, kas patinka? Tai jau nebus tikroji Lietuvos istorija. Ir trinti kažko iš aminties nereikia. Kas bloga, ką gera, bet tai buvo.“

Edgaras: „Lengva sakyti ar teisti, kai patis nebuvai tais laikais ir tose situacijose.“

Leonarda: „Tai kad atsirastų protas, kuris sugebėtų atsakyti... Bet viskas, matyt, Dievo valioje, kažką darome neprotingai.“

KAS? KUR? KADA?

Kybartuose
Kovo 22 d. (šandien), 10 val., miesto parke prasidės gerumo akcija „Suteikime paukščiams namus“.
Algimantas Kezio galerijoje eksponuojama liaudinių sodų paroda „Kad sodai žydėtų“. Planuojami į aplankyti paskambinkite tel. 370 671 09 231.

Vilkaviškyje
Kovo 23 d., 10 val., kviečiamas Lietuvos politinių kalinių ir tremtinių sąjungos Vilkaviškio filialo tremtinių susirinkimas, kuris vyks adresu: Gedimino g. 19.

Kovo 24 d., 12 val., bus rodomas filmas „Kung fu panda 4“, 14 val. – „Nutruką galvoti“ Don Kichoto pėdsakais“ (dublužuotas lietuviškai). Bilietai – po 5 eurus, 16 val. prasidės lietuviška komedija „Draugų lažybos“, o 18 val. – „Prasti reikalai“. Bilietai – po 6 eurus.

Kovo 28 d., 17 val., viešajoje bibliotekoje rengiamos pavasarinės kūrybinės dirbtuvės. Josė vilkaviškietė floristė Inga Kanapskienė pamokys susikurti šventinę kompoziciją Velykoms. Dalyvavimas nemokamas, žmonių skaičius ribotas. Kviečiama registruotis tel. + 370 672 13 947.

Balandžio 5 d., 18 val., Vilkaviškio trečiojo amžiaus universitetas sporto ir pramogų centre organizuoja jokių ir muzikos vakarą. Gros Šakų kultūros centro kapela „Linias“ (vadovė Asta Grigaitienė). Bilietas – 3 Eur.

Vistytėje
Kovo 24 d., 15 val., miestelio kultūros namuose vyks monografinis „Vistytis“ 3 dalies pristatymas. Leidinio sudarytojai – vistytičiai Vilnius Kofčubaitis (jis ir vyr. redaktorius), Genia Jurkyrienė, Juozas Jurkynas bei Algirdas Merkevicius. Išorinis leidinys skiriamas 60-ies metų Vistytės vardo sukakčiai.

Pilviškiuose
Kovo 30 d., 10 val., „Santakos“ gimnazijos sporto salėje vyks krepšinio varžybos mokytojų Artūnui Valtekaičiui atminti. Krepšinio entuziastai kviečiami aktyviai dalyvauti į varžybas registruojama el. p. ugdymas@pilviskiai.lt, tel. (8 342) 67 267. Daugiau informacijos yra svetainėje www.pilviskiai.lt.

Portugalijoje – vertingos aplinkos tausojimo pamokos

Grupelė Gražiškų gimnazijos mokinių ir mokytojų viešėjo Portugalijoje, kur įvyko kurtvirtas „Erasmus+KA220“ projekto „Rangers of Change“ (ROC – Pokyčių iniciatoriai) partnerių susitikimas.

Portugalija projekto dalyvius pasitiko vėsiu, lietingu oru, bet priėmimas buvo labai šiltas. Visi projekto dalyviai (ispanai, rumunai, graikai ir lietuviai) apsigyveno šeimoje, kur galėjo arčiau pažinti Portugalijos kultūrą bei tradicijas.

Viešnagės metu projekto dalyviai išklause paskaitų apie įvairias problemas, susijusias su klimato kaita, šukčių pertekliumi bei atliekų perdurbimu. Savo susirūpinimą išreiškė ne tik „Erasmus+“ projekto koordinatė, mokyklos Escola Básica e Secundária Martinho Árias direktorė, bet ir miesto valdžia.

Daugiau nei 40 viso projekto dalyvių pasodino „Erasmus+“ medelių sodą Sorės miesto parke, taip bent dalele prisidedami prie oro taršos mažinimo.



Projekte dalyvavusiems gražiškieliams įteikti pažymėjimai. Autorės nuotr.

Mokiniai taip pat susipažino su atliekų rūšiavimu portugalų namuose, lygino tai su savo tautiečių įpročiais ir atsakomybe. Veliau visi aplankė atliekų rūšiavimo aikštėlę, kur savo akimis pamatė, koks didelis visuomenės vartotojiškumas, kiek daug pastangų

ir rankų reikia perrūšiuojant visas atliekas, o kvapų prisiminimai išliks ilgam...

„Erasmus+KA220“ projekto „Rangers of Change“ dalyviai aplankė nuo 13 a. veikiančią Coimbras universitetą, kuriame yra 8 fakultetai, universiteto biblioteką, kurios

funduose saugoma daugiau kaip 250 tūkst. tomų iki 18 a. išleistų medicinos, geografinės, istorijos, humanitarinių ir fizikos mokslų, teisės, filosofijos, teologijos knygų. Įdomu, kad šioje bibliotekoje buvo filmuotos filmo „Gražuolė ir pabaista“ scenos.

Mokslieiviai plaukė kanalu Aveiro mieste, susipažino su druskos išgavimo paslaptimis, aplankė austrių augtinimo fermą, molio fabriką.

Dalyvavimas šiame projekte suteikė galimybių pažūrėti į atliekų kaupimą, rūšiavimą ir perdurbimą kitu kampu, vertinti kiekvieną įsigytą daiktą ir kuo mažiau švaistyti. Buvo šaunu susipažinti su Portugalijos architektūra, senamiesčiais, kiemuose augančiais apelsiniais, rąnkomis tapymomis plytelėmis, vietinių žmonių vašingumu ir šilumu. Pasak visų keturių Gražiškų gimnazijos atstunokų, tai – pats geriausias „Erasmus+“ projektas, kuriame teko dalyvauti, nes vaikai susirado draugų ne tik projekto laikotarpiu, bet tikriausiai ir visam gyvenimui.

Mūsų mokykla savo partnerių lauks balandžio mėnesį.

Rosa AKUCEVIČIŪTĖ
Gražiškų gimnazijos mokytoja



Município de Soure

10 h · 🌐



Alunos do programa Erasmus + aprendem mais sobre a separação de resíduos

No âmbito do projeto de cariz ambiental "Rangers of Change (ROC) enquadrado no programa de mobilidade Erasmus+, o grupo de jovens e professores participantes visitaram a ERSUC – Resíduos Sólidos do Centro, S.A.

Esta iniciativa surge na sequência da visita anterior ao Centro Ecológico do antigo Bairro Pré-Fabricado de Soure, organizada pela Divisão de Ambiente e acompanhada pela Eng. Cristina Madeira.

Com as duas visitas, os participantes tiveram a oportunidade de ficar a conhecer o processo de gestão dos resíduos sólidos urbanos, desde que são colocados no ecoponto em Soure até ao seu tratamento final nas instalações da ERSUC, sendo ainda sensibilizados para a importância da adoção de comportamentos ambientalmente responsáveis, nomeadamente da realização de reciclagem.





Município de Soure

2 d · 🌐



Jovens estrangeiros visitam Soure ao abrigo do programa Erasmus+

No âmbito do programa Erasmus+ que o Agrupamento de Escolas Martinho Árias de Soure integra, um grupo de 33 jovens e seus professores, oriundos de Espanha, Grécia, Lituânia e Roménia, encontra-se em mobilidade em Soure.

Os jovens participam no projeto de cariz ambiental "Rangers of Change (ROC)", que se relaciona com temáticas como alterações climáticas, situações meteorológicas extremas, escassez de água, reciclagem e sustentabilidade.

Neste contexto, o grupo participou numa plantação de árvores de espécies autóctones (nogueira e medronheiro) no Parque dos Bacelos e visitou o Centro Ecológico do antigo Bairro Pré-Fabricado de Soure, acompanhados pelos Serviços Municipais e pela Senhora Vereadora com o pelouro do Ambiente, Dra. Sónia Vidal.





Agrupamento de Escolas Martinho Árias - Soure

2 h · 🌐



Durante a tarde, o grupo da mobilidade deslocou-se à fábrica mais sustentável do mundo, a Ecogres situada em Ílhavo. Esta fábrica, produz loiça em grés fino, por processos inovadores e sustentáveis a partir dos melhores recursos naturais existentes em Portugal, entre os quais o caulino. Esta unidade fabril tem sido reconhecida com vários prémios internacionais por apostar na economia circular. Todos os desperdícios do fabrico de peças voltam ao início da produção e o ar quente dos fornos é reutilizado para outro setor da fábrica. Mais de 90% da produção é para exportação.

Este é um bom exemplo de sustentabilidade e um projeto de referência para o futuro. Mais uma vez, o projeto ROC proporcionou uma emersão em temas atuais, como a sustentabilidade e as alterações climáticas que são o âmago do projeto.



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ERASMUS+ PROJECT
2022-1-RO01-KA220-SCH-000085133



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