

S2WRE

N°02 - October 2022

SUN, WATER, WIND OF RENEWABLE ENERGY - S2WRE



MOBILITY N°2 IN POLAND



ERASMUS+

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



VET

LPN
ZSET
MSMTAL

SUMMARY

8 SOPOT and GDYNIA ORŁOWO

Day at the seaside



10 WELCOME TO ZSET

Lecture at OPEC
Icebreaker games
ZSET visit



14 GDYNIA

Sightseeing Gdynia
Emigration Museum



17 GDAŃSK

Gdańsk orienteering
game World War II
Museum



22 POWER PLANTS

Hydroelectric Power
Plant in Żarnowiec
& Wicko Wind Farm



25 PRACTICAL WORK

Installation of
photovoltaic systems
Creating Dobble cards



30 LAST DAY AT ZSET

Making a magazine
Kahoot
Wooclap

33 GASTRONOMY

Restaurants
Tastes of Poland

ERASMUS+

KA210 - VET

2021-1-FR01-KA210-VET-000032902

Project funded to the tune of €60,000 by the Erasmus+ program of the UE

ERASMUS+ Project S2WRE

3 VET, 3 countries, the same ambition.

Acting for the planet is a growing demand from young people around the world. Climate change shows that there is an urgent need to act for sustainable and renewable electrical energy.

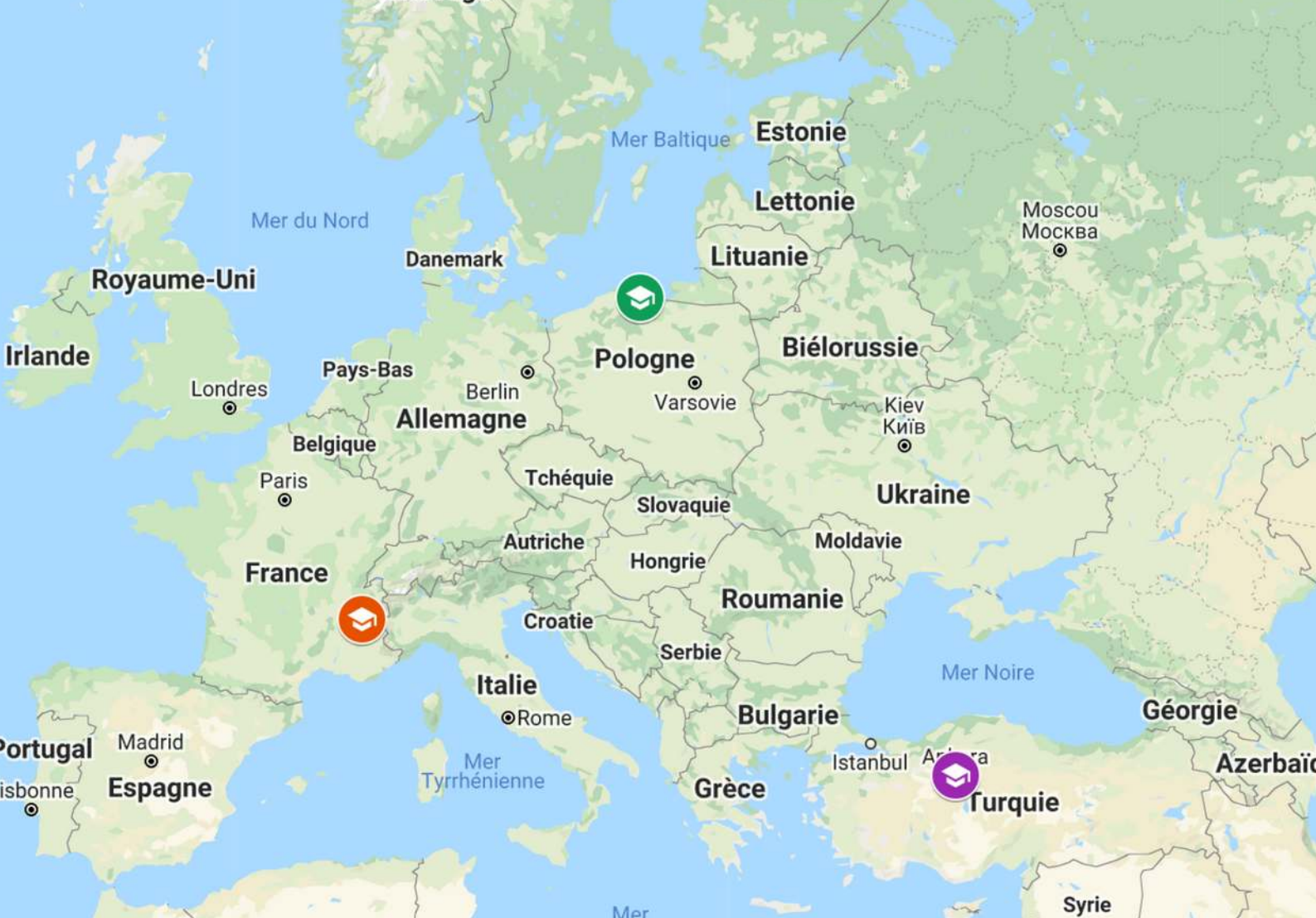
As a part of the international opening of the **Pablo Neruda high school** and the masterpiece of vocational education students, the teachers responded to the call for projects with the **Zespół Szkół Ekologiczno-Transportowych** in Gdynia, Poland, as a partner and the **Mimar Sinan Mesleki ve Teknik Anadolu Lisesi** in Yenimahalle/Ankara in Turkey, for an ERASMUS+ project Small-scale Partnerships in VET.

This S2WRE project has 4 objectives:

- Train eco-responsible electricians
- Acquire knowledge on renewable energies
- Acquire know-how of renewable energy installations
- Produce several collaborative productions

The students also collaborate remotely through the eTwinning platform using the TwinSpace application associated with the project **S2WRE**.

In addition to the stated objectives of this project, the teaching team wishes to establish a cultural exchange with the partners and develop the students' communication, critical thinking, collaboration as well as creative skills.



**FRANCE
POLAND
TURKEY**

**Teachers present during
the mobility in Poland:**

S2WRE

Students:

2nd year CAP ELECTRICIAN - LPN - FR

4U DEVICES and SYSTEMS of RENEWABLE ENERGY TECHNICIANS - ZSET - PL

12K ELECTRICIANS - MSMTAL - TR



Pablo Neruda High School

in Saint Martin d'Hères, France

**Mustapha NOUR
Isabelle DELEGLISE
Laurent DHAZE**



Zespół Szkół Ekologiczno- Transportowych

in Gdynia, Poland

**Larysa STUDZIŃSKA
Magdalena ŚMIGIEL
Krzysztof WOŹNIAK**



Mimar Sinan Mesleki ve Teknik Anadolu Lisesi

in Yenimahalle/Ankara, Turkey

**Ayşe ETBAŞ DINDAR
Ali YAZAR
Erdal UNAL**



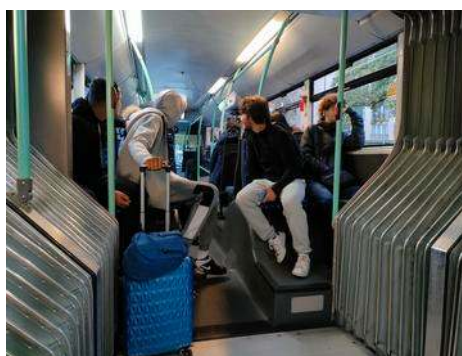
On the tarmac of Warsaw Chopin Airport

Our journey to Poland from France

For the second Erasmus+ mobility, we went to Poland. Our group from the Pablo Neruda High School in Saint Martin d'Hères consisted of 5 students: Antoine, Azzedine, Enzo, Maxence, Solifane, 2 professors of electrical engineering and an English teacher.



We took the mini bus from Grenoble to Geneva at about 3:00 a.m.



In Geneva, we took the tram at 7:30 a.m. then a bus to go to the airport Geneva International



On the plane to Warsaw



On the plane to Warsaw

Our journey to Poland from Turkey

Our group consisted of 5 students: Bünyamin, Doğan, Lütfü, Mustafa, Taha, 1 electric teacher and 2 ICT teachers. For most of us it was our first journey to Poland.



We went to Gdańsk Airport from Antalya Airport by Corendon Airlines. The flight lasted for 3 hours



Teacher Ali and students at Antalya airport



Turkish group on a transfer bus

OUR ARRIVAL

Warsaw Chopin Airport

We arrived at Warsaw Chopin airport on Saturday at 12:40 p.m.

Then, we met with the Turkish team of Mimar Sinan Mesleki & Teknik Anadolu Lisesi (MSMTAL) to have a meal at Mc Donald's together. They landed at 10 a.m.

After the meal, we went to the airport bus station. We took a group photo with the flags and after that we took the Flixbus coach to Gdynia.



We arrived at the baggage carousel



We went to have a meal at the McDo at the Warsaw Chopin airport



We're putting the luggage into the Flixbus

Group photo in front of Warsaw bus station



Final destination - Gdynia

The travel from Warsaw to Gdynia took us about 6 hours by coach.



We arrived at the Gdynia bus station at 9:35 p.m.

Polish teachers came to the bus station to welcome us.

Then, they accompanied us to the hostel by public transport.



Dinner

The teachers went to get pizza for dinner. We were very hungry, so pizza was a very good choice.



The hostel

Our accommodation - Hostel DV Morski in Gdynia.



First walk in Sopot Day at the seaside

*Photo above: Sopot
lighthouse*

On Sunday, October 16 at 10:30 a.m. we took the train from Gdynia to Sopot. We arrived in Sopot at 11a.m. Then, we walked through a pedestrian underground to the Monte Cassino street. There was a Crooked House with unusual architecture. We were walking 15min to the largest wooden pier in Europe. We saw a beautiful pirate ship called Statek Pirat. At 2 p.m. we went to have lunch at the restaurant Brat Łata.

From Sopot, we walked along the beach to Gdynia Orłowo, where we admired a picturesque Orłowo Cliff and the beautiful wooden pier in Orłowo. One group of students ran a race with the flags on the beach: Antoine, Azzedine, Bunyamin, Dogan. We also saw the Stefan Żeromski's House. After that, we strolled down the Promenade of Queen Marysieńka. We ended the day with a delicious dinner at the restaurant Di Strada Gdynia.

DAY AT THE SEASIDE



A Crooked House in the style of Gaudi called Krzywy Domek



In front of the Sheraton Sopot Hotel



In front of the Statek Pirat in Sopot



A walk along the beach from Sopot to Gdynia Orłowo



Flag race on the beach



On the wooden pier with Orłowski Cliff in the background

ZSET - FIRST VISIT

Zespół Szkół Ekologiczno- Transportowych

Monday, October 17, 2022

We met downstairs at our hostel at 09:15 with the Turkish team. We were walking 20 mins to the ZSET high school, where we were welcomed by Polish students and teachers.



Ecological and Transport Vocational High School

Morska 186
81-216 Gdynia
Poland

LECTURE AT OPEC

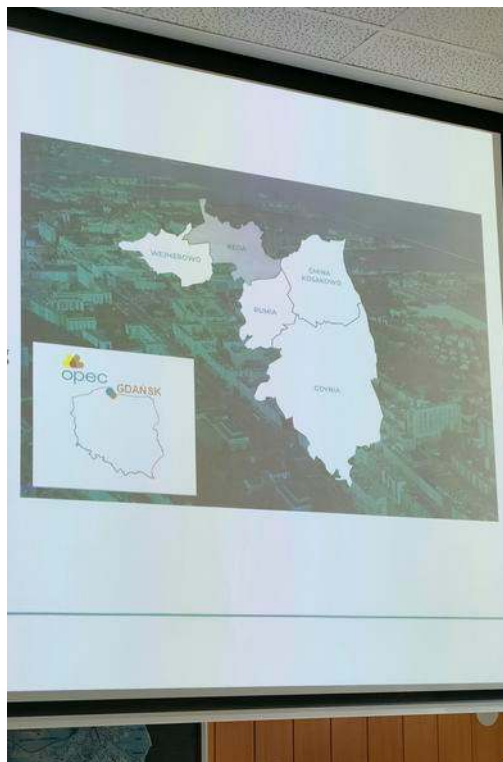
Local electricity producer and supplier

We started our Monday morning with discovering the local company OPEC (Okręgowe Przedsiębiorstwo Energetyki Ciepłej or District Heating Enterprise). It is very close to the ZSET building.

The company's mission is to meet the needs of companies, institutions and individuals in the supply of heating and electricity in the whole region.



Lecture at OPEC company in front of the LPN, MSMTAL and ZSET representatives



The supply heating and electricity region (Gdynia, Rumia, Wejherowo, Puck)

Network control room in the OPEC premises



Presentation of the decarbonization strategy to the 2040 horizon





ICEBREAKERS

Welcome to the ZSET

After visiting the OPEC company, we returned to the high school. We had ice breaker activities, and later we visited the school.

We played games to get to know each other better and that was fun. We first chose an m&m chocolate and depending on the color, we had to say in English what we loved, what we hated, the things that make us sad. Next, we learned some basic words in Polish, Turkish and French: hello, witam, merhaba - thank you, dziękuję, teşekkürler - goodbye, do widzenia, güle güle.

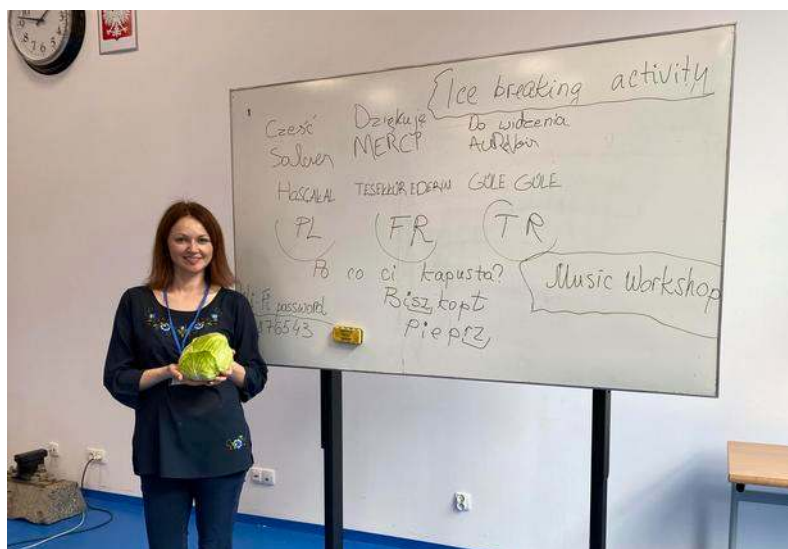
For the last game, we learned how to beatbox in Polish. The teachers gave us three words in Polish: po co ci kapusta (why do you need cabbage?), pieprz (pepper), biszkopt (biscuit). Then, we were split into four transnational teams to work on the music with different percussion instruments. Each student could choose an instrument and his words. Finally, each team presented their music with beatboxing.

Photo above: Exhibition of the posters prepared by the ZSET students of grades 1-4

ZSET ICEBREAKERS



The game of emotions with colors



Basic vocabulary in French, Polish and Turkish languages



Group 1 creating music with Polish, Turkish and French words



Song Interpretation of Group 1



Song Interpretation of Group 2



Song Interpretation of Group 3



GDYNIA

Sightseeing Gdynia

We visited Gdynia in 2 days.
Monday, October 17 in the afternoon, we left to discover the city of Gdynia. We saw two ships at Kościuszko Square, a sailing ship named Dar Pomorza and a military ship ORP Błyskawica. All around the marina, we saw benches with solar panels and USB sockets on the armrests. We could not visit the Aquarium due to the lack of time.

On Thursday, October 20 in the afternoon, we visited the Museum of Polish Emigration. We could see a 3rd class ship, one wagon for deportation, a wall filled with potatoes representing life of Polish peasants in 1880s.

The museum is located in the port of Gdynia in the historic Marine Station, where in 1870 and during the First World War, 3.5 million Poles, a third of whom Jews, left Poland for the United States, Brazil and France.

GDYNIA



In the background, two boats: a sailboat called "Dar Pomorza" and a military ship called "ORP Błyskawica"



The solar panels supply power to the usb sockets installed on the bench



Photo of the electrical engineering teachers



Taha (MSMTAL) playing leapfrog above the fountains



The statue of Antoni Abraham, a popular Polish writer from the Pomeranian culture and a Kashubian activist



Polish Emigration Museum in Gdynia

GDYNIA EMIGRATION MUSEUM



First room of the Polish Emigration Museum



Frédéric CHOPIN: composer and virtuoso pianist born in 1810 in Poland and died in 1849 in Paris



Potato wall



Reproduction of a transatlantic liner deck



Men in Black



French and Turkish handshake

Gdańsk city tour

Tuesday, October 18, 2022

French, Polish and Turkish students went sightseeing Gdańsk



In front of the statue of Jan Heweliusz (Johannes Hevelius, Polish astronomer, born in Gdańsk in 1611.)

We visited a museum of the Second World War, the historic centre with its old buildings, dating from the Middle Ages and St Mary's Church. Then, we took part in an orienteering city game, to discover the historical buildings in the city centre of Gdańsk.

WORLD WAR II MUSEUM - GDAŃSK

French, Turkish and Polish students on the steps of the entrance to the Second World War museum in Gdańsk.



Reproduction of a street destroyed by the Soviets during the Second World War. Below, a Soviet army T-34 tank in a reconstructed street.



This wall of stacked suitcases is symbolic: each suitcase belonged to Jews, who died in deportation, during the Second World War in Poland (Shoah).

French students in front of the USSR flag. On the EASTERN front, the Soviets pushed back the Nazis.

GDAŃSK



Poles walking down the street from Saint Mary's gate



"Brama Wyżynna" Gate (high door of the old town of Gdansk)



The interior of St. Mary's Church in Gdansk



Students playing orienteering city game



Teachers and students playing orienteering city game at one of the most important city tourist attractions



World War II Museum in Gdansk

GDAŃSK



Gdańsk Main Town Hall - a Gothic style building at Długa Street, it was built in 1378



The Old Crane in the background - one of the defining symbols of Gdańsk. It was built in 1367 and was used to load cargo on



Turkish students



Statue of Hermes, the Town Hall in the background

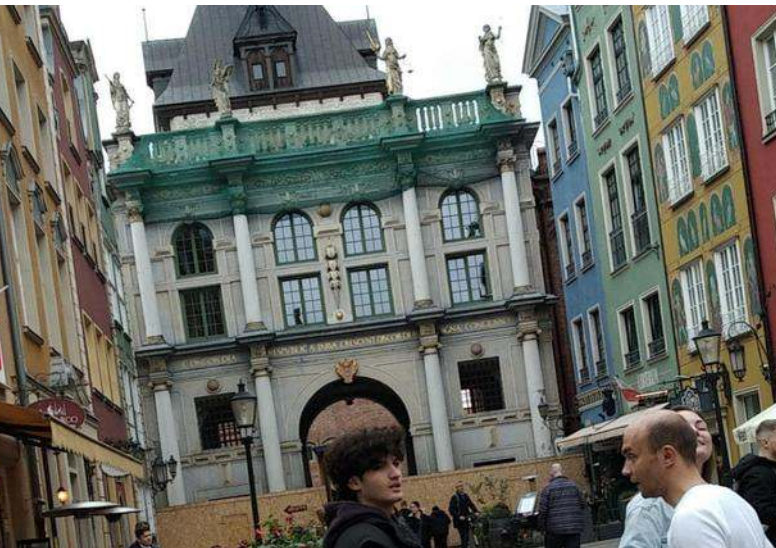


A first thermometer invented by Daniel Gabriel Fahrenheit (German physicist born in Gdańsk in 1686)



A beautiful old clock

GDAŃSK



The Golden Gate is a historic Renaissance city gate in Gdańsk



The Green Gate - one of city's most notable tourist attractions



Fountain of Neptune (Poseidon in Greek mythology)



Pirate ship in Gdańsk



Gdańsk Główny railway station (Gdańsk main station) in the background



Facade of an old building dating from the Middle Ages

POWER PLANTS

Wednesday, October 19, 2022

Discovery of a hydroelectric plant and a wind farm

We took the bus around 8:00 a.m. to pick up the Polish students in front of their school. Around 10:00 a.m., we visited a Żarnowiec Hydroelectric Power Station (PSH type). Then, we went to have a meal at the restaurant, which was situated in the middle of a unique park. We ended the day by visiting a wind turbine in Wicko.





Visit of the Żarnowiec Hydroelectric Power Plant

HYDROPOWER



PSH

PSH - *Pumped storage hydropower* is a type of hydroelectric energy storage. There are two lakes at different elevations in Żarnowiec hydroelectric power plant. The upper lake and the lower lake have a vertical drop of 119.3m.

TURBINES

In the hydroelectric power plant in Żarnowiec, four turbines produce in total a power of 680MW. A Francis turbine produces 170MW. The four turbines are reversible.

OPERATING MODE

To generate electricity, water moves down through huge pipes. The system also requires power as it pumps water back into the upper reservoir. PSH acts like a battery - it can store power and then release it when needed.



We saw four huge pipes.
Each pipe measures
1100m in length and
6m of diameter.

PGE - Polish Energy Group
(Polska Grupa
Energetyczna)



Visit of the Wicko Wind Farm

WIND TURBINES



*Photo above:
Transformer station MV/
HV 30kV/110kV*



TAURON EKOENERGIA

THE FARM

The wind farm is made up of 20 wind turbines. This farm has a total power of 40MW. Each wind turbine has a power of 2MW.

INTERIOR

We had the chance to visit the foot of a wind turbine. We saw a high voltage cell, an elevator and a retractable ladder.

THE MAST

The TAURON technician explained to us how to climb in all security at the nacelle. The nacelle constitutes the core of the turbine where there is a generator.

PHOTOVOLTAIC PRACTICAL WORK

Practical work with solar panels

Thursday, October 15, 2022

We had a practical training in transnational groups.



The task consisted on assembling materials: a solar panel, a battery, an inverter and a solar controller.

PHOTOVOLTAIC PRACTICAL WORK



The students are preparing the installation of the photovoltaic panel



Installation of the solar panel



Installation of the solar charge controller



Study and preparation of the wiring of the solar charge regulator

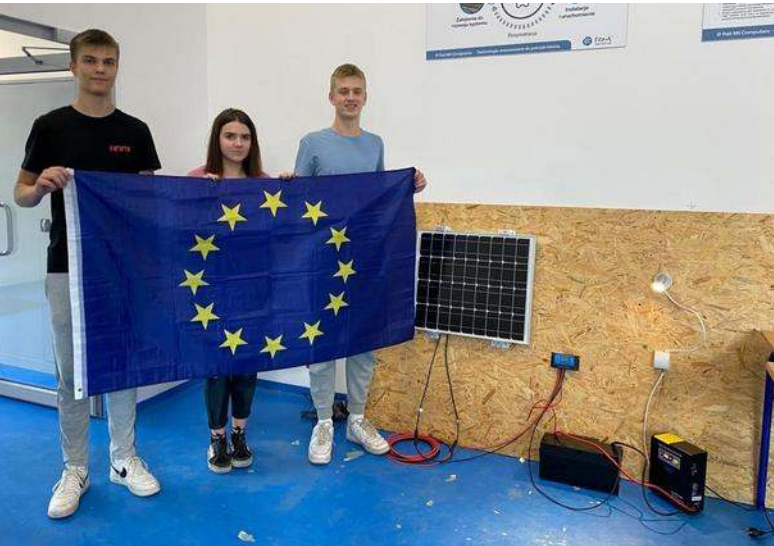


Connecting the battery to the solar charge controller



Materials and tools available to students

PHOTOVOLTAIC PRACTICAL WORK



Maksymilian, Oliwia, Michal



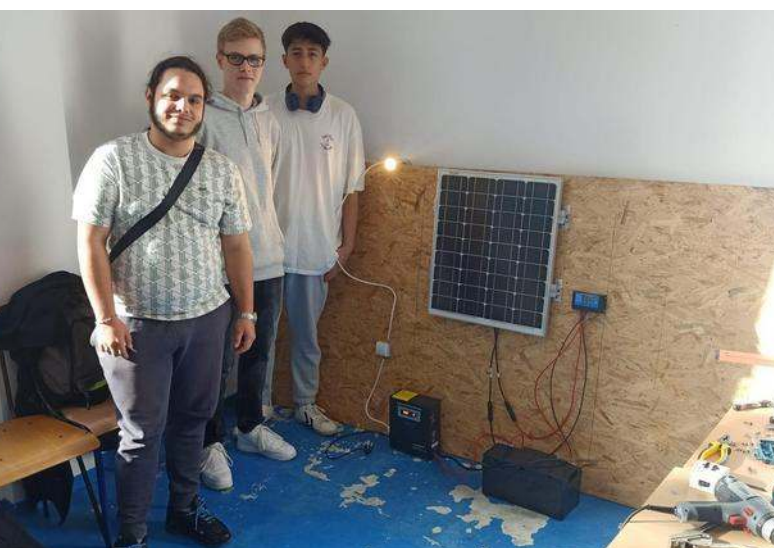
Krzysztof, Bünyamin, Azzedine



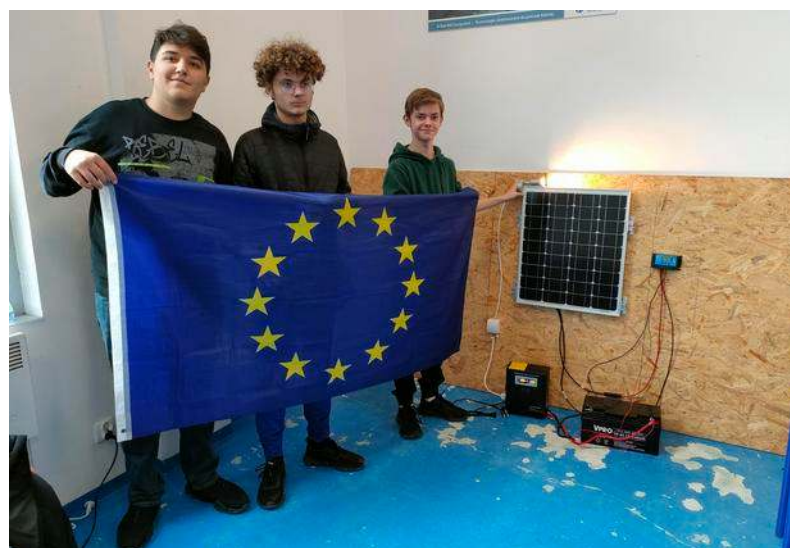
Solifane, Sebastian, Mustafa



Doğan, Antoine, Jakub



Enzo, Kacper, Taha



Lütfü, Maxence, Dominik

DOBBLE



Students searching for images



Teachers laminating cards



Students cutting out plastic cards



The DOBBLE card game - final result



Teachers playing cards



Game party between the students after dinner

LAST DAY



Friday, October 16, 2022

TIME TO SAY GOODBYE...

We started the last day with a Kahoot quiz on the highlights of the week to see what we remembered. Sample questions: What monument did we see in Sopot? What was the first visit? During the first visit, what type of power plant did we visit? What do we need for workplace safety? How many groups of generators are there inside the hydroelectric plant? What is the name of the type of turbine inside the hydroelectric

plant? Replace each turbine with its name. How many wind turbines does the wind farm include? How powerful is a wind turbine from the Wicko wind farm? Have we done practical photovoltaic installation work? Then, we worked on Madmagz magazine in transnational teams to write the report for the week. Afterwards, we did the mobility assessment on Wooclap. We had to give our opinion on mobility.

The head teacher of the ZSET high school had a farewell speech. After that, he gave us some gifts funded by Gdynia City Council (T-shirts, bags with the image of Gdynia). In the afternoon, we went to the Riviera shopping centre to buy souvenirs. At 7 p.m., we all gathered at the food court to have a meal together.

LAST DAY



Writing Madmagz in transnational teams



Writing Madmagz in transnational teams



Mobility Kahoot quiz



Kahoot podium: Kacper, Mateusz, Sebastian



Mobility assessment by Wooclap



Students taking part in mobility evaluation on their smartphones

LAST DAY



The headmaster of ZSET signing the certificates of attendance



Small talk



The MSMTAL team with gifts from the city council



The LPN team with gifts from the city council



Guests talking to ZSET headmaster



Students saying goodbye

GASTRONOMY

RESTAURANTS

We had meals in several restaurants (Polish, Italian). The restaurants were all different, the architecture was sometimes modern, sometimes old or classic. The food was delicious, the plates were very beautiful and colorful.



Brat Łata in Sopot

Located in the heart of the forest, the restaurant Brat Łata in Sopot, near the SKLA stadium in a wooden chalet with traditional architecture and modern cuisine. Very nice experience.

GASTRONOMY



Brat Łata in Sopot



Dwór Lisewski in Gniewino



Lunch in the ZSET classroom



Pierogarnia Mandu in Gdynia



Pyra Bar in Gdańsk



Pizzeria Trattoria di Strada in Gdynia

GASTRONOMY



Chicken dish



Fish dish



Soup as a starter



Tagliatelle with fresh salmon



Fish dish



Pierogi Polish specialty

RETURN TRIP

Exchanging moving farewells

In the evening at about 10:00 p.m. we came to Gdynia railway station.

The MSMTAL team was waiting for their bus, and the LPN team was waiting for their train to Warsaw.

A ZSET coordinator came to see us off with a ukulele.

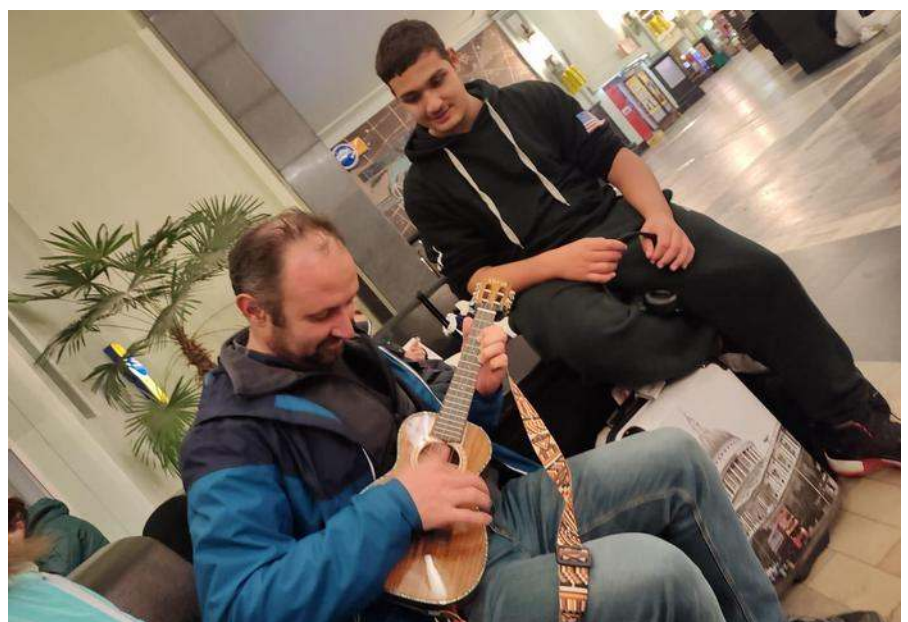
First, we said goodbye to our Turkish friends from MSMTAL.



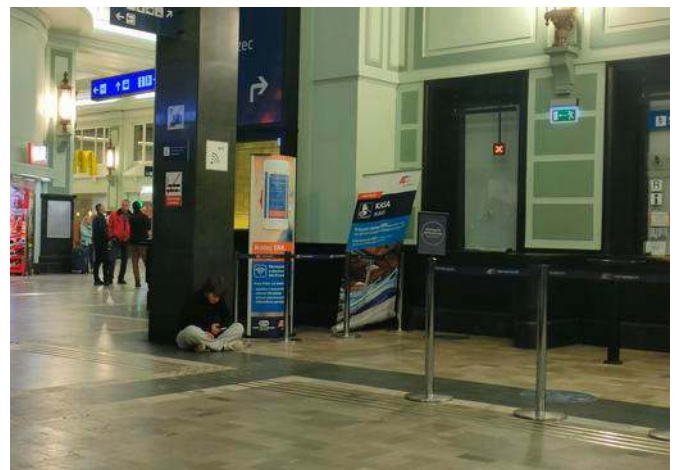
Enzo trying to play a song on the ukulele



Entertainment at the station



Ali teacher discovering the instrument



RETURN TRIP



The project coordinators before the departure of the MSMTAL and LPN teams



The MSMTAL team heading to Warsaw airport by Flixbus



The LPN team on the Gdynia railway station platform ready to take the train to Warsaw



Nap on the train



The LPN team arrived at Warsaw East Railway Station



The LPN team waiting for the bus in front of the Warsaw East Station heading to Warsaw CHOPIN Airport

RETURN TRIP - THE LPN TEAM



Waiting for boarding at Warsaw CHOPIN airport



Our plane on the tarmac at Warsaw CHOPIN airport



Everyone is well-settled on the plane



Arrival above Lake Lemman from Geneva



Group photo of the LPN team with the Geneva Lake Lemman water jet in the background



Lake Lemman



Merci - Dziękuję - Teşekkürler

It was another unforgettable week

We would like to thank all the high school students, teachers, staff and management of the ZSET for their warm welcome.



Merci - Dziękuję - Teşekkürler

It was another unforgettable week



ANTOINE 2CAP ELEC

Let me introduce myself. My name is Antoine. I am 17 years old, I am at the Lycée Pablo Neruda in the 2nd year of CAP Electricien. I participate in the Erasmus+ S2WRE project and I had the chance to participate in 2 mobilities. First, with classmates, we went to Ankara, Turkey, at the end of September. In the middle of October, we went to Poland. We arrived in Poland on the evening of October 15, very tired from the trip. The next morning we went for a walk in the city of Sopot and Gdynia Orłowo. I saw very beautiful monuments and a wooden pier.

I took a picture with a statue. This statue is that of Antoni Suchanek (a very famous Polish painter). I lay down smiling on the painter to take a picture.

This trip to Poland taught me to speak English better, to see new landscapes, and also to discover Polish gastronomy which was truly a delight. I was able to discover a new culture and meet new people. I will keep a very beautiful memory of this European mobility.

LPN



ENZO 2CAP ELEC

Let me introduce myself. My name is Enzo. I'm 17 years old. I'm in electrician class at Pablo Neruda, France. With my classmates we went to Turkey and Poland as part of the Erasmus+ S2WRE project.

The photo was taken at Gdynia railway station on October 21 at 10 p.m., the day we left for France. I like music and I improvise a song from the Gipsy Kings (djobi djoba) with the ukulele of Larysa, the Polish teacher, who came to say goodbye to us in song. I like this photo because I was saying goodbye with music.

I was looking forward to returning home after a week abroad.

This trip made me discover new landscapes, meet new people, taste Polish gastronomy, visit museums. I learned a lot about the history of Poland from emigration to World War II.

LPN



SOLIFANE 2CAP ELEC

Let me introduce myself. My name is Solifane. I am 17 years old, I am in the 2nd year of CAP electrician at Pablo Neruda high school. With my classmates, we left for Poland on October 15 for our ERASMUS project. We found our Turkish and Polish comrades with whom we are working on the S2WRE project.

I am very happy to participate in this project because it was the first time that I went abroad. I know Turks and Poles in France and this allowed me to discover the country where they are from.

We were well-received in Turkey and in Poland. When we arrived they offered us drinks and cakes, it was delicious. The teachers were very nice. I tried to speak English with the teachers and the students. In Turkey, I really liked the visit to CYTMTAL which was a positive energy building. There were many girls in the classes in a Technical high school. In Poland, I enjoyed visiting the WW2 museum in Gdansk where I saw the invasion of Poland by the Nazis and then the Soviets.

LPN



LÜTFÜ 12K

Hello, I am Berat Lütü, a student of Mimar Sinan Vocational and Technical Anatolian High School.

On our 3rd day in Poland, we went to the World War II museum in the photo. We went to Gdansk by train from Gdynia, it was a great journey.

We visited Gdansk, it was a beautiful city and it enchanted us with its architecture. We walked around the town square and played urban orienteering game. It was fantastic time to explore the city by playing a game. It was the best day for me.

I am a high school senior this year. Before I graduate, I have good memories that I will save in my life.

I will miss my Polish and French friends very much, I will not cut off communication with them, maybe I can take part in such a beautiful project in the future.

MSMTAL



TALHA ALI 12K

I am Talha Ali, 17 years old, from Ankara, studying at Mimar Sinan Vocational and Technical Anatolian High School.

I went abroad for the first time. I had good days and good memories in Poland. We travelled from Gdynia to Gdansk by train. I saw new tastes, new friends, new architectures and different city planning. It was all so great.

This is the first time I have seen the wind turbine and hydroelectric power plant up close. We collected very good memories with my friends from my class.

Both Poles and French were very friendly.

I am very happy to be a part of such a beautiful project, thank you everyone.

MSMTAL



ZSET

SEBASTIAN 4U

Hi, I'm Sebastian, a ZSET student.

The most interesting event for me was a trip to Żarnowiec Pumped Storage Hydroelectric Power Plant. I learnt how hydropower works. Then, we visited Wicko Wind Farm, so I learnt a lot of interesting things about wind power. It was great I could see the plants with my own eyes.

There was also a trip to Gdańsk, where we went to the World War II Museum. In Gdynia, we visited the Museum of Emigration.

We created our own Dobble cards together with foreign students.

We ate Polish food and it was very delicious.

I'm going to France in February, so I'll have a chance to meet and work with Turkish and French students again.

It was a fantastic week.



KACPER 4U

Hi, I'm Kacper. I'm 18 years old.

During this week in Poland I visited Żarnowiec Pumped Storage Hydroelectric Power Plant and Wind Farm in Wicko. The most exciting thing was, that I could walk into the wind turbine. In fact, it was the first field trip of mine at our school.

I also visited Gdańsk, the biggest city of the Tricity. We had a sightseeing city game there.

I liked practical workshops the most among the school activities. We installed photovoltaic panels on the wall and plugged a light bulb into it.

In my opinion, this mobility was such a nice experience and I really enjoyed meeting French and Turkish people at my school. We will see each other soon in France, it will be great to see you all again.

ZSET

zdrowienia z Sopotu!

Sopot



www.visit.sopot.pl

• NATURALNIE •
Sopot
• KULTURALNY •



WELCOME TO GDYNIA, POLAND



YOUTUBE

If you want to see our photo montage : [CLICK HERE](#)



ESEP

If you would like to visit our eTwinning platform - TwinSpace project on the European School Education Platform (ESEP) : [CLICK HERE](#)

EDITORIAL TEAM

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WITH OUR SECOND MOBILITY
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Mrs Śmigiel



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