

Erasmus+ learning programme for group activities

1. Information about the learning mobility

Field	School education
Activity type:	Group mobility of school pupils
Mode:	Physical
Start date:	06/02/2023
End date:	10/02/2023
Participants' profile	19 secondary school students from Eötvös József Gimnázium és Kollégium, Tata, Hungary. The students are from grade 10 and 11, they are between 16-17 years old. They are from classes that specialises in mathematics. They learn English and German. The main learning needs are learning about the technology of climate change; building a device to model some aspect of a method in combating climate change and create a poster presenting the topic and the built device; improving their communication, teamwork and language skills and their digital competence;

1.1. Sending organisation

Organisation name:	Eötvös József Gimnázium és Kollégium OID: E10004921
Address:	2890 Tata, Tanoda tér 5. Hungary

1.2. Hosting organisation

Organisation name:	Otto-von-Taube-Gymnasium OID: E10176115
Address:	Germeringer Str. 41, 82131 Gauting Germany

2. Timetable

Timing	Activity/Session/Task
Day 1 – 8:00-10:30	Welcome speeches. Lecture on Energy efficiency by Markus-Lintl at Otto-von-Taube Gymnasium. (English)
Day 1 – 11:00-14:30	Project work: the student groups discuss their preparatory work and finalise the data that they will present on Thursday. (English, German)
Day 2 – 10:00-11:30	Lecture on the Potentials in Renewable Energy by Prof. Dr. Christian Holler at the University of Applied Arts, Munich. (English)
Day 2 – 14:00-16:00	Guided tour in the old town of Munich. (English)

Day 3 – 9:00-12:00	Project work: finalising the models and the posters, preparation for the presentations. (English, German)
Day 3 – 12:30-18:30	Outdoor sport activity: sledging at Spitzingsattel.
Day 4 – 9:00-12:00	Presentations of the project works to fellow students and teachers at Otto-von-Taube Gymnasium. (English, German)
Day 4 – 16:00-18:30	Cultural activity: learning about German folk culture and practicing a typical Bavarian folk dance. (German)
Day 5 – 8:00-11:00	Visiting historic sites in the old town of Munich. (English, German)

3. Learning programme

Activity 1: Lecture on Energy efficiency by Markus-Lintl (Orcan Energy AG) at Otto-von-Taube Gymnasium. (English)	
Learning methods:	The lecture was presented in the lecture hall of the school. Not only the German and Hungarian students who participate in the Erasmus program, but all German students from grade 10 attended the lecture. After the presentation on energy efficiency issues, described from scientific, technical, economic and financial aspects, the students asked questions from Mr. Lintl.
Learning outcomes:	The participants learnt about a working and successful a start-up company in the energy sector. Besides the new scientific, technical and economical knowledge, their vocabulary improved and presentation technique of the lecturer was exemplary for them. The questions from the students showed, the new ideas impressed them.

Activity 2: Project work part 1	
Learning methods:	The aim of the collaboration between the students was to create a model and a poster on a topic that is connected to the technology of climate change. These topics were: Solar cooker, Wind energy, Solar energy, Water pump storage, Mobility of the future, Energy saving in everyday life, Living with climate change, Climate neutral living... The groups started their work in October 2022, in Tata, Hungary, and finalized their models, posters and presentations during this mobility in Gauting, Germany. Mixed groups of German and Hungarian students were working in groups of 5. The language of the posters is English, but the working language was German as well. First the student groups discussed their preparatory work and finalised the data for their posters and presentation.
Learning outcomes:	By assigning this complex task to the students our purpose was to give them an opportunity to experience how scientific teamwork is. From this 4 months long experience they could learn: preparation and planning of teamwork; researching a

	scientific topic; sharing ideas; discussing what model to choose, what to include in the poster and the presentation; delegating work; using a foreign language for scientific and work purposes; teamwork techniques; using online communication for teamwork; learning new digital skills in sharing material and editing applications.
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Activity 3: Lecture on the Potentials in Renewable Energy by Prof. Dr. Christian Holler at the University of Applied Arts, Munich. (English)

Learning methods:	The visit to the University of Applied Arts and the lecture of Prof. Dr. Christian Holler was a unique opportunity to experience the environment of the higher education and the level of scientific research for the students. The topic of the potential in renewable energy was also closely connected to the modes the students were working on.
Learning outcomes:	The lecture enabled the students to expand their knowledge on the field of energy usage questions. Their language skills and vocabulary improved, and the learnt about presentation techniques in a university environment.

Activity 4: Guided tour in the old town of Munich (English)

Learning methods:	The students were divided into two groups and two tourist guides introduced the historic sites of old town Munich to them.
Learning outcomes:	Besides learning about the historic and cultural heritage of Munich, the students practiced their language skills because the guides involved them by asking several questions while describing the sites.

Activity 5: Project work part 2

Learning methods:	The groups finalised works and presented their models and posters to the other groups. They evaluated the works and corrected the mistakes before printing the posters.
Learning outcomes:	In the final stage of the preparation the students evaluated each other's works, practiced constructive reflection. They improved their presentation and language skills.

Activity 6: Outdoor sport activity: sledging at Spitzingsattel.

Learning methods:	The outdoor sport activity, sledging at Spitzingsattel.
Learning outcomes:	Social learning, language usage German and English, learning new sport skills. The common sporting activity was a great opportunity for the students to improve their language and communications skills, the outdoor activity allowed them to freely communicate and the shared experience helped them to improve their vocabulary in areas of sport, travel, weather and free time.

Activity 7: Project work part 3	
Learning methods:	The groups presented their models and posters to the wider audience of the school and to Juhász Gergely, the representative from the Hungarian Consulate of Munich.
Learning outcomes:	The students arranged their presentation stands in the physics laboratory to enable them to show how their models work and displayed their posters. The presence of the unknown students and adults made them aware of the challenges of presenting to an audience. They divided among themselves the parts of the presentation. Their cooperative, presentation and language skills improved.

Activity 8: Cultural activity: learning about German folk culture and practicing a typical Bavarian folk dance. (German)	
Learning methods:	Peter Frank and Katerina Frank, folk dance teachers introduced the traditional Bavarian folk dance, dress and culture to the students and teachers.
Learning outcomes:	The lively and active atmosphere of the program allowed the students and teachers to improve their language and communications skills, the experience helped them to improve their vocabulary in areas of folk culture and lifestyles.

Activity 9: Visiting historic sites in the old town of Munich. (English, German)	
Learning methods:	The second visit to the historic sites of old town Munich was a practice for the students to present what they learned about the town.
Learning outcomes:	They improved their social, language, digital, navigation and presentation skill while using their knowledge of history and geography.

4. Accompanying persons

The following person(s) will accompany the participants and guide the learning activities:

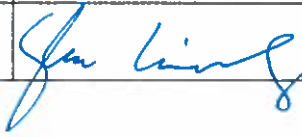
Full name:	Dr. Szeidemann Ákos
Position or qualification:	teacher of Physics and Chemistry at Eötvös József Gimnázium és Kollégium
Email:	szeidiak@gmail.com
Phone number(s):	+36203176447
Responsibilities:	accompanying the group, travelling arrangements, scientific and technical support

Full name:	Major-Rochlitz Ágnes
Position or qualification:	teacher of English and Computer Science, deputy at Eötvös József Gimnázium és Kollégium
Email:	major.r.agnes@gmail.com
Phone number(s):	+36207704827
Responsibilities:	accompanying the group, travelling arrangements, scientific and technical support

5. Signatures

The signatories confirm that the information in this document is correct and complete.

For sending organisation	
Full name:	Barsi Éva
Position:	headmaster
Date and place:	Tata, 13 th February 2023
Signature:	

For hosting organisation	
Full name:	Sylke Wischnevsky
Position:	headmaster
Date and place:	Gauting, 10 th February 2023
Signature:	

Participants list

Participants

#	Full name	Organisation	Signature
1	Nagy Nimród	Eötvös József Gimnázium és Kollégium	Nagy Nimród
2	Kishalmi András	Eötvös József Gimnázium és Kollégium	Kishalmi András
3	Bán Márton	Eötvös József Gimnázium és Kollégium	Bán Márton
4	Bunkhardt Dominik Ferenc	Eötvös József Gimnázium és Kollégium	Bunkhardt Dominik Ferenc
5	Csongrádi Sára	Eötvös József Gimnázium és Kollégium	Csongrádi Sára
6	Gyuricza Eszter	Eötvös József Gimnázium és Kollégium	Gyuricza Eszter
7	Katona Marcell	Eötvös József Gimnázium és Kollégium	Katona Marcell
8	Kerek László Barnabás	Eötvös József Gimnázium és Kollégium	Kerek László Barnabás
9	Kövesi Alíz	Eötvös József Gimnázium és Kollégium	Kövesi Alíz
10	Orosz Ádám	Eötvös József Gimnázium és Kollégium	Orosz Ádám
11	Rochlitz Anna Ilona	Eötvös József Gimnázium és Kollégium	Rochlitz Anna
12	Bán Lili Eliza	Eötvös József Gimnázium és Kollégium	Bán Lili Eliza
13	Bräutigam Áron	Eötvös József Gimnázium és Kollégium	Bräutigam Áron
14	Fodor Sámuel Mihály	Eötvös József Gimnázium és Kollégium	Fodor Sámuel Mihály
15	Nagy Dávid	Eötvös József Gimnázium és Kollégium	Nagy Dávid
16	Rossz Koppány	Eötvös József Gimnázium és Kollégium	Rossz Koppány
17	Tasnádi Bálint	Eötvös József Gimnázium és Kollégium	Tasnádi Bálint
18	Tóth Ábel András	Eötvös József Gimnázium és Kollégium	Tóth Ábel
19	Varga Gergely	Eötvös József Gimnázium és Kollégium	Varga Gergely

Accompanying persons

#	Full name	Organisation	Signature
1	Dr. Szeldemann Ákos	Eötvös József Gimnázium és Kollégium	
2	Major-Rochlitz Ágnes	Eötvös József Gimnázium és Kollégium	

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