

Final Report



25th Junior-Eco-Expert-Project

"THE PROTECTION OF BIOCENOSES – OUR FUTURE"

1.-6.July 2025, Spojená škola, Rakovice 25, Rakovice, Slovakia



Spojená škola Rakovice has been actively participating in the international environmental project Junior Eco Expert Project for several years. In 2025, the project celebrated an important milestone – its 25th anniversary. This unique initiative connects vocational secondary schools from five countries – the Czech Republic, Hungary, Poland, Austria, and Slovakia. This year, our school had the honor of representing Slovakia.

The main theme of this anniversary meeting was: “Protection of Biocoenoses – Our Future.”

From June 1st to 6th, 2025, 70 students (14 from each participating country) gathered in the host country – Slovakia. Throughout the week, they worked in five international teams under the guidance of teachers from Spojená škola Rakovice. Students deepened their professional knowledge, discussed pressing ecological challenges, and significantly improved their English language skills, as English was the working language of the event.

In addition to academic and language development, participants also experienced international team collaboration, which fostered mutual understanding and cultural exchange among young people from different backgrounds.

Each team focused on a specific environmental topic:

- Team 1 – Saving Regional Plant Varieties
- Team 2 – The Importance of Bees for Our Lives and the Environment
- Team 3 – Plant Biodiversity and Its Impact on Humans
- Team 4 – Water Retention in Urban and Rural Areas
- Team 5 – Ecological Flower Farm

The program also included expert excursions that introduced students to real-life ecological practices. They visited:

- The *Včelovina* mead production facility in Smolenice,
- The *Žito* ecological education center in Moravské Lieskové,
- The Gene Bank at *NPPC – VÚRV* in Piešťany,
- And the *Plantex* company in Veselé, where they explored the full process of vegetative propagation of fruit trees, modern fruit-growing technologies, and the importance of preserving both traditional and newly bred varieties.

Cultural and historical elements were also integrated into the program through guided tours of Trnava and Piešťany, providing a deeper understanding of the region’s heritage.

Leisure activities were not left out. Students enjoyed bowling in the local bowling hall in Rakovice, offering a fun and relaxed atmosphere after intensive workdays. A friendly international floorball tournament also took place, promoting fair play and camaraderie.

The week culminated in a final ceremony, where each team presented the results of their work, new knowledge, and memorable experiences – all in English. The event was enriched by short

folk performances from each participating country, highlighting the friendly and open spirit of the project.

The project was made possible with the support of the International Visegrad Fund and the Trnava Self-Governing Region.

We believe that this exceptional week provided all participants with valuable knowledge, new experiences, and lasting memories. We extend our sincere thanks to all project partners, teachers, and students who contributed to the success of this remarkable anniversary meeting.



Opening Ceremony of the “25th Junior Eco Expert Project, The Protection of Biocenoses – Our Future”



Opening Ceremony of the “25th Junior Eco Expert Project, The Protection of Biocenoses – Our Future”

Team No. 1

Theme: Saving regional plant varieties

The goal of the group was to understand the importance of old regional varieties, clarify terms such as cultivar, variety, and breed, and explore the period in which these varieties were developed. We also focused on the classification of varieties based on their origin. Additional important objectives included familiarizing students with the issues surrounding the endangerment of old fruit varieties, explaining the significance of their preservation, and the need to show proper respect for these varieties, as they are an inseparable part of our cultural and natural heritage – each variety has its unique story.

The practical part focused on demonstrations of vegetative propagation of small fruits using herbaceous cuttings and creating irrigation basins for newly planted trees. Our understanding of the importance of preserving old regional varieties was deepened during a field trip to the **Biele Karpaty Fruit Nursery** in Moravské Lieskové, which is actively involved in their conservation and landscape protection. We also visited the **E.K.O. Center Žito** in Sýpka, where we participated in experiential learning focused on working with plants and utilizing human senses.

As part of the expert excursion, we visited the **Plantex Garden Center** in Veselé, where we learned about the significance of growing fruit species, propagation techniques, and the sales process.

All the set objectives were achieved – we carried out all planned activities, and the students acquired new knowledge and practical skills. We used methods such as practical demonstrations, exercises, and professional excursions.

Activities of the team No 1

Monday, June 2, 2025

After the official opening of the project, we got acquainted with the group members through friendly conversation. The group then took a tour of Spojená škola, Rakovice, the school grounds, and the apple orchard, where we provided information about the history of the park and the educational institution. In the afternoon, we focused on a presentation about old regional varieties – explaining their significance, reasons for endangerment, and methods of preservation.

In the practical part, we created irrigation basins around newly planted fruit trees on the school grounds. The basins were filled with wood mulch, which acts as a weed barrier and helps retain moisture. All trees were properly watered.

Tuesday, June 3, 2025

We conducted a professional excursion to the **E.K.O. Center Žito** in Sýpka and the **Biele Karpaty Fruit Nursery** in Moravské Lieskové. At the **E.K.O. Center**, we participated in activities focused

on environmental education, experiential learning, and ecological education. The center features a natural garden and an orchard.

At the fruit nursery, we learned expert information about old regional varieties and also visited their sales area, where we had the opportunity to purchase plants.

Wednesday, June 4, 2025

In the morning, we visited the **Plantex Garden Center** in Veselé, where Mr. Tureček introduced us to the range of fruit trees, the crop storage system, and the economic operation of the business. We also toured the sales areas offering plant materials for gardeners. In the afternoon, we continued with the practical part. Students were given worksheets with instructions on vegetative propagation of small fruits – currants, gooseberries, jostaberries, and Kamchatka honeysuckle. After cutting the cuttings, the ends were treated with a rooting stimulant and then placed into rooting pots. This method is effective and simple for obtaining new plants.

Thursday, June 5, 2025

The final day was dedicated to preparing the final presentations of each group. Students also reinforced the knowledge and practical skills they had acquired throughout the project.



Doing irrigation basins for young fruit tree plantings



Visiting to the school apple orchard



Study excursion to the E.K.O center, Moravské Lieskové



Study excursion to the E.K.O center, Moravské Lieskové



Study excursion, Plantex company, Veselé



Vegetative propagation of small fruits



Vegetative propagation of small fruits

Team No. 2

Theme: The Importance of Bees for Our Lives and the Environment

The aim of our team was to raise awareness of the extraordinary importance of bees for human life as well as for the overall ecological balance of the landscape. We focused on explaining the role of bees in pollinating plants – not only wild flora, but especially agricultural crops that are part of our daily diet. Bees play an irreplaceable role in maintaining biodiversity, natural balance, and food security.

In addition to their ecological significance, we also highlighted the economic value of bee products such as honey, wax, and propolis. Our objectives included drawing attention to the threats bees face – such as the excessive use of pesticides, environmental pollution, climate change, and the loss of natural habitats. We aimed to inspire people to actively protect these vital pollinators and show that even small steps – like planting flowering plants or supporting local beekeepers – can have a big impact on a sustainable future.

Our objectives were successfully achieved. Thanks to a combination of hands-on activities and theoretical knowledge, we managed to spark the interest of young people in the importance of bees. The participants understood the need to raise awareness about pollinator protection and their contribution to our planet.

Activities of the team No. 2

Monday, June 2, 2025

At the beginning of the day, we completed an introductory training on the significance of bees in nature and in human life. We then visited the school apiary, where we learned about the various stages of bee development – from egg to adult worker. We practiced safe behavior around bees – dressed in protective suits, used a smoker, and observed life inside the hive. We had the opportunity to see the queen bee, workers, and drones. Each participant could hold a frame with bees and observe them up close. The day concluded with checking the hive's stores, refilling nutrition, and tasting fresh honey.

Tuesday, June 3, 2025

We took part in a full-day excursion to the *Včelovina* production facility in Smolenice, where we learned fascinating facts about honey processing, the production of bee products, and the principles of ecological beekeeping. We learned that up to one-third of all human food is directly dependent on pollination by bees. In the afternoon, we visited Trnava, where a guide showed us the historical city center – including the town hall, the Church of St. Nicholas, and the former prison building.

Wednesday, June 4, 2025

This day focused on creative, hands-on work. We built insect hotels using natural materials such as bamboo, wood, straw, and pinecones. These shelters provide nesting spaces for solitary bees and other beneficial pollinators. Each group created its own model, which could be taken home or placed around the school grounds.

We also made beeswax candles. Students learned how to melt, shape, and mold beeswax into decorative candles, which will later serve as gifts or promotional materials to support awareness activities.

Thursday, June 5, 2025

The final day was dedicated to preparing the group presentation. We summarized all the knowledge and experiences gained during the previous days and created an engaging presentation that included interactive elements – such as product demonstrations, bee-themed quizzes, and artworks related to pollination. As part of the animation activities, we prepared balloon bees and an educational program aimed at environmental education for children.

We concluded the day by participating in the final conference, where each team presented the results of their work. Our presentation received positive feedback thanks to its rich content, practical demonstrations, and excellent team cooperation. The afternoon continued with a cultural performance and a festive closing ceremony of the project.



Lecture on the importance of bees in nature and in human life



Visiting to the school apiary



Bee observation



Study excursion Beekeeping, Smolenice



Study excursion Beekeeping, Smolenice



Historical tour of the city of Trnava



Historical tour of the city of Trnava



Creating of "insect hotels"



Creating animation tools for "Bee Day"



Insect hotels presented by team no. 2

Team No. 3

Topic: *Biodiversity and its Impact on Humans*

Group Objectives:

The aim of the group was to deepen understanding of the importance of biodiversity for humans as a fundamental element of ecosystem sustainability, focusing in particular on plant and animal diversity. We concentrated on comparing field and meadow ecosystems and highlighted the negative impact of invasive plant species threatening natural biodiversity. We introduced several practical measures to support biodiversity—such as building insect hotels, green roofs, applying mosaic mowing techniques, sowing meadow seeds to attract pollinators, and creating retention elements in the landscape.

We also explored phytotherapy—the healing effects of selected plants. A key part of the program was the visit to the Gene Bank of the National Agricultural and Food Centre (NPPC) in Piešťany, where students learned about preserving genetic resources for future generations.

We successfully met all our goals—every planned activity was implemented. We worked through laboratory and field exercises as well as a professional excursion.

Activities of the team No. 2

Monday, June 2, 2025

The introductory meeting was dedicated to getting to know each other and a guided tour of the school and school park, including an explanation of the institution's history. In the laboratory, we discussed the importance of biodiversity and its impact on humans and nature. This was followed by three practical exercises:

- production of calendula healing ointment,
- preparation of an ecological insect repellent,
- creation of lavender pillows.

Students followed exact procedures and had access to all necessary tools and plant materials. Calendula ointment has positive effects on the skin, the ecological repellent offers a gentle alternative to commercial products, and lavender pillows have a calming effect. The day concluded with a reflection and a discussion on the practical relevance of these products.

Tuesday, June 3, 2025

As part of a professional excursion, we visited the Gene Bank of the National Agricultural and Food Centre in Piešťany. We gained insight into the importance of preserving plant genetic resources, toured the storage facilities, and learned about the system for cataloging over 20,000 seed samples. In the afternoon, we visited the Spa Island in Piešťany, where students learned about the history of the spa and the composition of the healing mud and thermal springs.

Wednesday, June 4, 2025

This day was dedicated to a field exercise focusing on comparing field and meadow ecosystems. Students worked in groups and mapped the species composition of plants and animals within a 1 m² area. They then identified the species using field guides and online resources and recorded the results in prepared tables. The comparison revealed greater diversity in the meadow ecosystem.

In the second part of the day, students explored phytotherapy—working in pairs, they researched the use of meadow plants for healing purposes and presented their findings to the group.

Thursday, June 5, 2025

The final day was dedicated to preparing the group's project output. Students sorted and arranged photos, created the final presentation, and selected the most appropriate materials to reflect the aims and content of their work. They participated in the final conference, where they presented their results to the other project participants.



Preparation of calendula cream.



Preparation of eco-repellent.





Study excursion to the Gene Bank in VURV Piešťany.



Making of lavender pillows.



Study excursion to the Gene Bank in VURV Piešťany.



Study excursion to the Gene Bank in VURV Piešťany.



Cultural and historical excursion on the spa island, Piešťany.



Cultural and historical excursion on the spa island, Piešťany.



Field exercise on school grounds.



Field exercise on school grounds.



Evaluation of field tasks.



Implementation of the assigned task.

Team No. 4

Topic: Water Retention in Urban and Rural Areas

The main goal of our group was to bring students closer to the importance of water in both urban and rural environments, focusing on its impact on the landscape, nature, and everyday human life. We emphasized the need to understand the importance of water retention measures and the sensitive use of land in accordance with the principles of sustainability.

The theoretical part consisted of a presentation outlining the activity schedule and introducing the topic of water retention. This was later linked to practical tasks and field exercises. The methods we used included:

- Experimental method – comparing the water retention capacity of different soil surfaces,
- Practical exercises – creating city models,
- Field activities – excursions focused on sustainable water management.

We successfully met the group's objectives. The students were actively involved in solving tasks, worked in teams, communicated, and demonstrated their ability to apply the knowledge gained in practice.

Activities of the team No 4

Monday, June 2, 2025

After an initial introduction and getting to know each other, the group attended a lecture on the importance of water in the landscape, the role of vegetation, and the possibilities of water retention in urban and rural environments.

In the experimental part, students compared the retention capacity of three types of surfaces – grassy, vegetated, and bare soil. The goal was to determine which surface best retains water when the same volume of liquid is applied.

This was followed by a practical exercise: creating two city models. Students were randomly divided into two groups:

- Group 1 created a model of a city with green areas and functional water retention elements (retention basin, green roofs, vegetated facades),
- Group 2 worked on a model of a city without vegetation or green infrastructure.

Students had access to components produced via 3D printing. Each group presented their models and compared the advantages and disadvantages of both solutions.

Tuesday, June 3, 2025

We visited the E.K.O. Center Žito in Sýpka, Moravské Lieskové, which focuses on ecological water management and sustainable land use. The excursion included:

- An introduction to the philosophy and operation of the center,

- A workshop on water retention in cities and rural areas,
- Hands-on activities such as:
 - Designing a garden with water retention elements,
 - Making lemonade from local herbs,
 - Exploring the garden using all senses,
 - Visiting a fruit tree nursery and learning about native woody plants.

Wednesday, June 4, 2025

The goal of the excursion to Plantex in Veselé was to introduce students to the cultivation of fruit and ornamental trees and their potential use in water retention systems. The program included:

- A tour of the growing areas and fruit storage facilities,
- An overview of ornamental plants suitable for urban greenery,
- A discussion on the importance of vegetation in mitigating the urban heat island effect,
- Ecological group games focused on environmental education.

Thursday, June 5, 2025

The final day was dedicated to processing the group's findings and preparing their output. Students sorted and selected photos, prepared a presentation, and formulated their findings and recommendations.

The day culminated in the final conference, where each group presented the results of their work. Group No. 4 presented their findings using a visually attractive model and a presentation emphasizing the importance of water management under changing climate conditions.



Creating of city models.



"Water retention" experiment



Printing components into a city model on a 3D printer.



Work on assigned tasks.



Creation of a 3D model of the city.



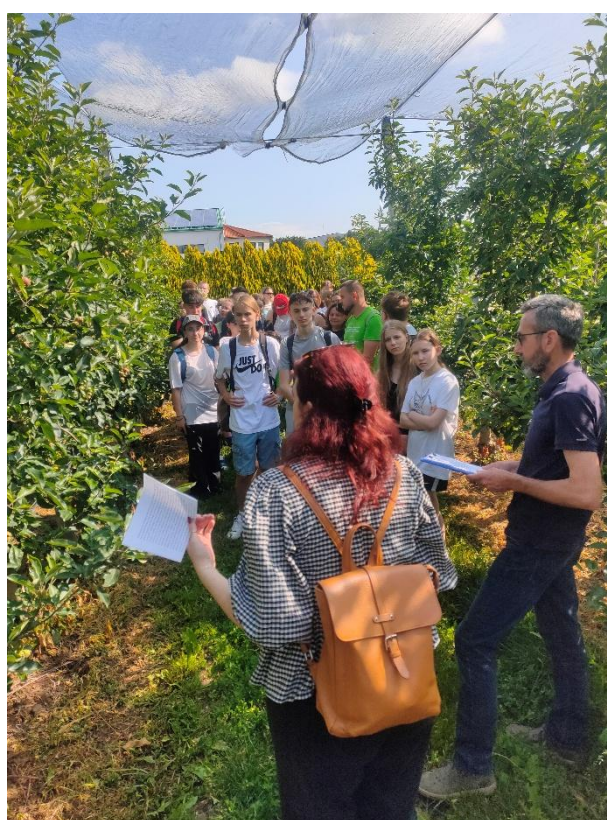
Study excursion to the E.K.O. center Žito v Sýpka, Moravské Lieskové



Study excursion to the E.K.O. center Žito v Sýpka, Moravské Lieskové



Study excursion, Plantex company, Veselé



Study excursion, Plantex company, Veselé



3D model of a green city.



3D model of a city without greenery.



Study excursion to the E.K.O. center Žito v Sýpka, Moravské Lieskové.

Team No. 5

Topic: Ecological Flower Farm

The goal of our group was to introduce students from various vocational secondary schools to the principles of how an ecological flower farm operates. We explained what flower cultivation entails — from seasonal tasks to the actual processing of plant material. Part of our aim was to teach students to recognize and name the most commonly grown annual flowers, learn their scientific (Latin) names, and become familiar with their appearance and characteristics. A secondary, but no less important, objective was to create a personalized flower seed mix of annuals and design original packaging for it. The week concluded with the creation of a flower arrangement made entirely from compostable materials.

We successfully achieved our goals. The students collaborated actively, communicated well, and created imaginative outputs that combined creativity with environmental awareness.

Activities of the team No. 5

Monday, June 2, 2025

The first day was dedicated to getting to know the group members and presenting the week's program. In the morning, we went out into the surroundings of the school, where students collected plant material. Back in the classroom, we processed the material — removing leaves, trimming stems, and sorting them into water containers by species.

In the afternoon, we introduced the concept of an ecological flower farm, discussed the tasks growers perform throughout the year, and explored which types of plants are most commonly cultivated on such farms. We also learned Latin plant names through hands-on demonstrations.

Another activity was creating our own annual flower seed mix. Students first learned the rules for mixing flower seeds (considering plant height, bloom time, color, and biological requirements). They folded their own seed packets from paper, designed their own packaging, and mixed a blend from the available seeds. Each mix had to include at least seven different annuals of varying heights and bloom periods.

Tuesday, June 3, 2025

Together with two other groups, we went on an excursion to Moravské Lieskové, where we visited the environmental and community center Žito in Sýpka. The program was diverse and engaging:

- Exploring the environment using senses (e.g., walking with closed eyes),
- Making lemonade from fresh herbs,
- Playing plant-themed bingo,
- Building models from toothpicks.

Due to rainy weather, we had to cancel the planned visit to the fruit tree nursery and instead took part in an alternative program near the granary. Our guide introduced us to both well-known and lesser-known fruit species planted in the center's garden. The program also included fruit tasting and a presentation on plant diseases and pests, along with suggestions for ecological plant protection methods.

Wednesday, June 4, 2025

In the morning, we took a walking trip to the village of Veselé to visit Plantex, a modern horticultural company. We learned how they grow fruit (such as strawberries, peaches, and apples) and fruit tree saplings, which are sold in their own garden center. After touring the growing areas and storage facilities, we also visited the sales area offering a wide range of ornamental plants and garden supplies.

In the afternoon, we worked on creating compostable flower arrangements. We did not use floral foam; instead, we used reusable chicken wire. All plant material was fresh and locally collected — suitable for composting after wilting.

We began with a presentation introducing the concept of floral arrangements, basic arranging rules, and students sketched a design of their decoration. They then worked in pairs to create original arrangements, which they presented to the whole group. They described the materials used and explained what occasion their arrangement was suitable for. Since the weather was beautiful, we worked outdoors in the pleasant shade of trees.

Thursday, June 5, 2025

In the morning, students were divided into three teams, each of which created a presentation summarizing one day of activities. It was wonderful to see them communicating in English. The teachers guided them, assisted with phrasing and grammar, and together we compiled the parts into the final presentation of Team No. 5.

In the afternoon, the final conference took place, where all five groups presented the results of their week-long work. Team No. 5 was represented by six students from the Czech Republic, Hungary, Poland, Austria, and Slovakia. Their presentation was lively, visually attractive, and included samples of their work.

The closing part of the program featured cultural performances from each country and short presentations by the schools participating in the project. Attendees also heard a speech from the school director and expressions of thanks to the organizers.



Team No.5



Getting to know plants in the school greenhouse



Preparation of flower mixture.



Floral mixture.



Study excursion, E.K.O. center, Moravské Lieskové



Study excursion, Plantex company, Veselé



Creation of ECO flower arrangements.



Sports activities

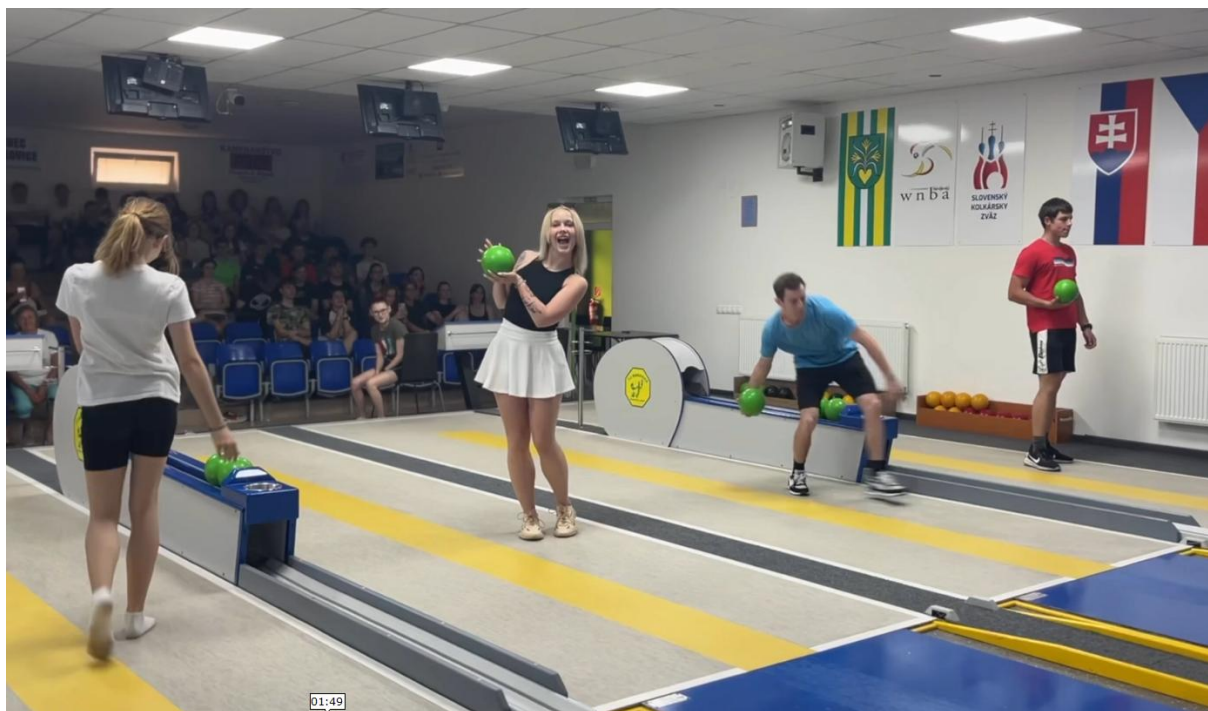
Floorball tournament of the partners schools (Gym, Rakovice)





Bowling tournament of teams, (Bowling Hall, Rakovice)





Final Ceremony

Thursday, June 5, 2025

The final conference of the international project took place at Spojená škola in Rakovice. The program was rich, festive, and carried a spirit of cooperation, cultural exchange, and the presentation of students' and schools' results achieved during the project.

The conference was officially opened by the school principal, Mgr. Henrieta Kunicová, who warmly welcomed all guests. This was followed by a greeting from the Mayor of Rakovice, Mr. Dušan Daloš, who addressed the participants with words of support and appreciation for the successful implementation of the project.

Subsequently, presentations by the five student teams took place, each presenting the outcomes of their work. Each team focused on a different aspect of biocoenoses protection within the framework of sustainable development.

This was followed by a block of international greetings and cultural performances by the partner schools:

- HLUW Yspertal (Austria) – the school director Mgr. Gerhard Hackl addressed the audience, and students presented an artistic performance.
- TFG Tokaj (Hungary) – the principal Mgr. Erika Tóth Molnárné spoke, followed by a cultural program performed by the students.
- Zespół Szkół im. Władysława Szybińskiego Cieszyn (Poland) – the principal Mgr. Iwona Bebek gave her greeting, and students enriched the program with a cultural contribution.
- SOŠEP Veselí nad Lužnicí (Czech Republic) – represented by Ing. Ladislav Honsa, who delivered a greeting on behalf of the school, which also presented a cultural performance.

The closing part of the program belonged to Spojená škola Rakovice, where Mgr. Henrieta Kunicová addressed the audience once again and students of the school performed a cultural program.

At the end of the conference, Mgr. Henrieta Kunicová delivered a closing speech, thanking all partners and participants for their work and cooperation. She presented a proposal for the continuation of the project, with a vision for further collaboration and the expansion of activities in environmental education at the international level.

To commemorate the 25th anniversary of the project, the principals of the participating schools jointly cut a large celebratory cake.

The conference confirmed the strength of partnerships among schools and the importance of such projects in shaping students' values and awareness in the field of environmental protection. Video link 25th JUNIOR ECO-EXPERT PROJECT:

<https://www.youtube.com/watch?v=VJF2QpZjoms>



Principals of partner schools



Final ceremony, Spojená škola, Rakovice



Mayor of Rakovice



Presentation of team results



Presentation of team results



Presentation of team results



Presentation of team results



Cultural program of students from Austria



Cultural program of students from the Czech Republic



Cultural program of students from Slovakia



Cultural program of students from Poland



Cultural program of students from Hungary



Final ceremony of the 25th Junior Eco Expert Project

We would like to express our heartfelt gratitude to all the participants, teachers, partners, and supporters who contributed to the success of the 25th Junior Eco-Expert Project.

Your enthusiasm, dedication, and collaboration made this anniversary meeting truly exceptional.

Together, we protect biocenoses – together, we build the future.

THANK YOU.