



SUSTAINABILITY NEWSLETTER

<https://greenergreen.eurscva.eu>



The BTFWW mission is to educate and inspire our pupils to embrace a sustainable lifestyle and mindset and to take action to make the changes they feel are needed to improve the world around them. This newsletter showcases our school and community projects. There are three issues per year.



Green School Awards

We are happy to say that both the Primary and Secondary Schools have obtained the Green School Certification again this year, with the Primary achieving Grade A! Well done to everyone, particularly the student council who did a lot of work!

Secondary COP 29

Congratulations to all the students who participated in this year's Model COP29, where they sampled the complex world of climate policy and global cooperation.

Under the guidance of Prof. Vansteenkiste, students were responsible for researching their assigned countries, crafting opening statements that reflected their nation's climate ambitions and challenges. They investigated current progress in addressing climate change, formulated plans for financing mitigation efforts, and discussed strategies for collaboration with other countries on climate finance.





All of our P5 students (EN, FR, IT, NL and DE) have participated in Climate Fresk workshops thanks to our teacher Marc Perrin and parent Alison Micklem who have become facilitators. They are now creating workshops for our parent community.



S3 Dutch Vegetables

As part of an ecology project, our S3 students studying science through Dutch have been putting their learning into action by reviving the garden beside our sports hall. The result are these tomatoes and beans; the real “fruit” of their hard work and collaboration! 🍅 It’s great to see project-based learning and sustainability come together in such a hands-on and rewarding way.

P3 Composting Canteen Waste

The whole of P3 (IT, EN, FR, NL and DE) classes took charge of composting for our School Garden Composter this year. For 3 weeks they measured the total weight of leftover food from their plates and then removed the compostable food and weighed it separately. In 3 weeks nearly 13kg of food was composted! The project continued all year with so much waste reused as compost.



Secondary Golf and Orienteering Project

The initiative aims to promote outdoor physical activity through golf and orienteering, connecting these sports disciplines to key concepts in the Human Sciences curriculum, such as spatial awareness and interaction with the environment, providing students with a comprehensive and dynamic educational experience.



Green Food Week

For Green Food Week we teamed up with FoodInsider.it. Green Food Week was a celebration of sustainable and healthy eating. Our School Canteen removed plastic bottles and encouraged everyone to bring in their own reusable bottle. The Canteen offered no-meat Thursday. A special thanks to AGSEV for promoting sustainable snack options and for promoting the week, to COMSEV for their fantastic organisation, and to all students, staff, and parents who supported and engaged wholeheartedly with this important initiative.



The Primary completed the No-Waste Snack measuring during Green Food Week with a student-parent joint campaign to make snacks healthier and to reduce waste. **We saved 31% of CO2 emissions!**

Both the Primary and Secondary had workshops from local company 'Yorganic' about organic food - You can learn more about Yorganic, including their new pick-up point near our school, by visiting their website.

Working with Frutta e Verdura nelle Scuole the students of the Primary Giornolino Group planned some healthy food tastings. For this special week the Primary also had a talk from an expert Nutritionist about healthy and sustainable eating.

Parents Association Water Talk

Following the success of having no plastic water bottles for Green Food Week, the Parents Association and Comsev organised a lunchtime talk from a water expert to demonstrate the safety and quality of our tap water. Our aim is to try and get the whole school using reusable bottles that they can fill from home and refill from our fountains at school.



Secondary Maris Project

Our Secondary Erasmus MARIS team travelled to beautiful Malnate to collect water samples from the river as part of their investigation into microplastics. They have also been testing water in our school taps and water fountains with great results.

Using reusable water bottles

Our P4 classes did a survey of the P4 Level to see how many children are bringing in their own bottle and decided to launch a 'Bring your Own Bottle - BOB' campaign. They found that 90% of Primary students bring their own bottle, which is great.

We are working to try and get the whole school using reusable bottles!



Materna - 3 R's - RECYCLE - Recycling Project - Making Paper

The Materna children have worked together to look at how we can reuse and recycle paper. They recycled paper into new paper and added wildflower seeds so that the children could take them home and plant them!



Biodiversity P5 Project

P5 students (FR, DE, EN, IT and NL) all worked together to identify 3 areas of unused grounds to study to increase biodiversity in our school grounds.

One area they planted grass, one was left alone and one had many interventions such as plants, compost, bird boxes, stick piles and stones. They noticed a big increase insects from their work, we hope to continue and extend this project next year.



Walk to School Week

To support sustainability and encourage community the Parents Association organised 'Walk To School Week' where students and parents met every morning to walk through the trees to school each day. Everybody loved it and we are now starting 'Forest Fridays' to continue this idea every Friday. Come and join us!



P2 IT Strawberry Garden

The P2 IT students all worked together to rebuild our Strawberry gardens. They worked hard and had lots of fun.



P2 Litter Measuring

Working with our campaign to reduce Snack Waste, P2 Classes counted the amount and type of litter left in the playground each day for 1 week. The first week we had 107 pieces with CO2 emissions of 0.33kg.

After our Snack Waste campaign with the Student Council and Parents we remeasured and we have saved 0.153 kg of CO2 per week.

Secondary Moustrap Race

The annual 'Moustrap Race', where the Mensa is transformed into a race track! S3 Integrated Science students put their learning on the 'Work and Machines' unit to the test. This hands-on project tasks students to design and build a car powered solely by the energy stored in a standard moustrap. No batteries, no motors: just the application of knowledge and physics in motion.



P2 Bin Labelling

Our P2 students wanted to relabel their bins to help students sort the waste better. They designed their own signs that explain what to put in each bin.

PLASTICFREE



The Plastic Free association visited all the P5 classes to raise pupils' awareness of the problems caused by the excessive use of plastic, the need to reduce its consumption, reuse and recycle.



Europe Day Community Clothes Swap



During the Europe Day Art Exhibition 'Mostre d'Arte' the Parents Association worked with the school to organise our first Clothes Swap in the Materna Rotonda. Nearly all of the clothes were swapped and we are hoping to repeat this event next year.



Don't forget the monthly Ispra Repair Cafe, where you can swap clothes and get broken things repaired.

Materna - 3 R's - REUSE - Toys

The Materna children have worked together to look at how we can reuse and recycle paper. They made their own recycling bins to practise sorting, and reused old cardboard to make car tracks to play with.



Eco Run



Ecorun Varese was a wonderful success, with over one hundred students, staff, and family members participating! The warm weather was welcome as we walked, jogged and ran through the streets of our beautiful city. Many who did not race supported with enthusiastic cheers along the route and embraces on the finish line. It was heartwarming to see our community come together yet again.

Using Recycled Materials for Art and visiting Remida

As a whole school we are trying to reuse materials more in our art work. The Materna children (EN, NL, FR, DE and IT) all visited the Remida Centre where they had lots of fun making things with recycled materials



Reducing Energy Consumption

Thanks to the Student Council, all Primary classes now have 2 Energy Monitors who wear badges and help their class to turn off lights, computers, screens and to reduce energy.

The Maintenance Team are replacing bulbs with LED in the whole school - 80% complete and we have so far saved 24486 watts!



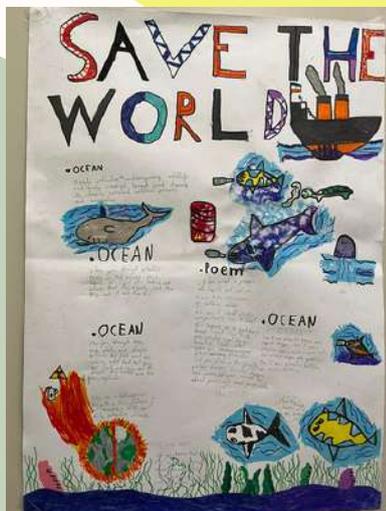
Model European Council 2025

A team of 15 students represented our school in the Model European Council 2025, hosted by ES Luxembourg II from March 12 to March 15, 2025. The event took place at the European Convention Centre Luxembourg (ECCL) and provided a valuable learning experience for our students.

As part of the MEC, students debated the following topics that relate to sustainability:

1. New 'Fit for 55 package'; this legislative package of the EU aims to reduce greenhouse gas emissions by 55% by 2030.
2. Critical Raw Materials Act Reform.
3. Green hydrogen bank.

World Water Day



Text Book Swap

For the second year AGSEV and BTFWW have organised two Secondary Text Book Swap events with great success. They were a great success with people involved and together we are reducing waste and helping each other. With the new AGSEV Swap app in place we hope to help all families to reuse text books instead of having to buy new.



Sustainability for the Secondary Science Symposium

For this year's Science Symposium there was a lot of sustainability innovation amongst our students. One group won 'best prototype' for the Walking Electricity project where shoes charge batteries through walking. Another group won a 'junior finalist' award for a project converting plastic to cinnamon. Well done everybody!

Upcycling Waste: The Conversion of Polystyrene Plastic into an Aromatic Flavourant

THE AIM
To transform polystyrene, a plastic waste, into an edible food flavourant, cinnamaldehyde.

METHOD AND RESULTS

- 1 Preparation of Polystyrene**
Polystyrene was collected, cleaned, and washed down with acetone. The mixture was then dried and ground into a polystyrene powder.
- 2 Pyrolysis Process**
The polystyrene powder was then mixed with MgO and heated up to boiling point 345°C. 21 ml of Styrene was extracted with a purity of 97%.
- 3 Synthesis of Cinnamaldehyde via the Vilsmeier-Haack Reaction**
The extracted styrene underwent a formylation reaction to produce cinnamaldehyde.
- 4 Purification and Separation**
The product was purified through distillation, then left at 4-6°C overnight and finally washed with distilled ether and water using a separatory funnel. The resulting liquid has a strong cinnamon scent.

CONCLUSION
The experiment successfully converted polystyrene into cinnamaldehyde, but further refinements in reaction conditions, purification, and process optimization are needed for practical application. The glue byproduct needs further investigation.

Surprise Glue Byproduct
An unexpected byproduct of the pyrolysis reaction: a tacky styrene-polystyrene mixture with superstrong adhesive capabilities could carry up to 2kg!

MATE: MIRIAM ESINIA ES VARESE

Walking Electricity

by Felice Syrota, Yumnampanopich (S2INA) and Miran Myrashtyrbekbaeva (S2INA) European School of Varese

Introduction
We built a shoe that can produce and store electricity using a system of piezoelectric chips embedded under the shoe's insole, and connected multiple LEDs to answer four questions:

- 1) What is the average electricity generated when walking?
- 2) What is the time and number of steps required to fully charge a 1.5V supercapacitor?
- 3) What is the time and number of steps needed to fully charge a standard 1.5V alkaline battery?
- 4) What is the time and number of steps needed to fully charge an average smartphone?

The Building Process:

1. To verify ideas.
2. To build an electrical circuit identical to the shoe's.
3. Double-checking the shoe's circuit.
4. To ensure we were piezoelectric shoes.
5. To collect the piezoelectric energy.
6. To connect the AC.
7. To use 1.5V supercapacitor.
8. To use 1.5V supercapacitor.
9. To use 1.5V supercapacitor.
10. To use 1.5V supercapacitor.
11. To use 1.5V supercapacitor.
12. To use 1.5V supercapacitor.
13. To use 1.5V supercapacitor.

RESULTS

Energy Produced	Steps Produced (average when walking charging)
0.0004 (mAh)	0.160

Charging Time and steps	Average 1.5V AAA rechargeable battery (about 200 mAh)	Average smartphone (about 4,000 mAh)
Time	Approximately 2 hours and 17 minutes	Approximately 4,200 hours (5.8 months)
Steps	Approximately 7,420	Approximately 3,637,800

Our Prototype

Conclusion
In conclusion, our experiment was a success, and we addressed all of the questions we set out to answer. Although the generation of electricity does not allow it to be used as the future, electricity production does not become more efficient and therefore more popular.

Fun Fact:
We got inspired by the piezoelectric effect and used it to create a shoe that can generate electricity from people walking on it.

Key: Red=positive Black=Negative