

Can technology reduce the amount of litter in schools?

Europa School UK (Primary)

University College London (UCL)



Overview and aims

Europa School UK is located in a rural area of Oxfordshire. Unfortunately, litter often spoils the beautiful grounds of our school and, besides being unsightly, it has a negative impact on the environment and our wellbeing.

This project aimed for Year 5 pupils to:

- Measure and understand the littering issue
- Launch a school-wide anti-littering campaign

New skills learned thanks to our STEM partner during this project were:

1. Coding micro:bits
2. Using Tinkercad to design ID items
3. Using a 3D printer



Litter at Europa School UK

Research and investigations undertaken

During the 1st phase of the project (2024), we:

1. Measured how much, where and when littering was taking place and what year groups were responsible for it. To do this, we learned to code pocket-sized computers called micro:bits and we used them around the school over 8 days to quantify the littering events taking place. This gave us detailed quantitative data by day, time and place.
2. Conducted qualitative interviews with students to understand why they thought littering took place.



Coding micro:bits



Designing anti-littering posters on Canva

During the 2nd and last phase of the project (2025), we:

1. Designed anti-littering posters
2. Designed rewards with Tinkercad for 3D printing
3. Used the 3D printer
4. Coded micro:bits to measure littering pre-campaign
5. Ran the anti-littering campaign in our school
6. Measured littering post-campaign
6. Shared the project overview and results in an assembly



Using the 3D printer



3D printed rewards for the anti-littering campaign

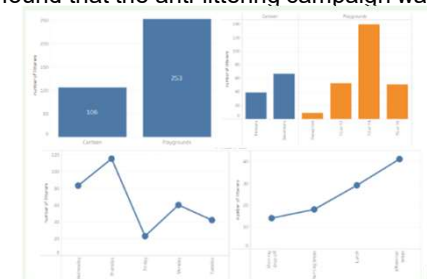


Year 5 class leading assemblies in front of the whole school, explaining what they did and what they found out

Results and conclusion

We were surprised by the high numbers of littering events: 359 over one week! We discovered patterns in the data relating to the place, time and year groups. This information will be invaluable for developing a highly targeted anti-littering communication campaign in the next phase of the project.

During the 2nd phase of the project, we found that the anti-littering campaign was impactful on the amount of littering.



Final summary

This project has been a special, memorable project for Europa pupils for a number of reasons:

- It focused on a local problem and how to find solutions to it
- It was a hands-on project
- It gave the pupils agency to solve a real-life issue

We want to replicate some parts of this project within our school by integrating it to our curriculum. We also would love to share what we did with other schools so this amazing project can be replicated across the country, and (because we are a multilingual school)