

## "Creative connections of the observatory 4.0 GLOBE and PULCHRA" – SUMMER SCHOOL

An **international Summer School** was held from 14 to 18 June in Cervignano del Friuli (Italy). Involved 23 students of the third and fourth classes of the chemical curricula of the **ITT Malignani-ISIS della Bassa Friulana**.

After school closes for the summer holidays, Pulchra's experimental activities were conducted in an intensive school program by integrating them with the Globe Italy and Australia microplastics experimentation project with an international and multidisciplinary vision.

Experts of the GLOBE Italia Association such as the prof. Coceano MP and Mocellin G., professors and researchers from the University of Udine of DiSA Contin M., Sigura M. and Coco F. as part of the PULCHRA project shared this experience by making contributions during field activities.

The challenge consists of a scientific enhancement-fruit of some areas along the Ausa river in the Pradulin park of Cervignano del Friuli. The activities carried out are: outdoor teaching, use of technologies applied to the environment, international research on environmental issues, teamwork, scientific laboratories at school.

In the five days of activity, the students and teachers L. Rigonat, P. Zanon and E. Polesel of the school ISIS "Della Bassa Friulana", explored the Ausa river (figure 1) in a canoe with the agronomist I. Snidero and C. Salvalaggio collecting water samples for the determination of chemical and microbiological parameters (figure 2).



Figure 1

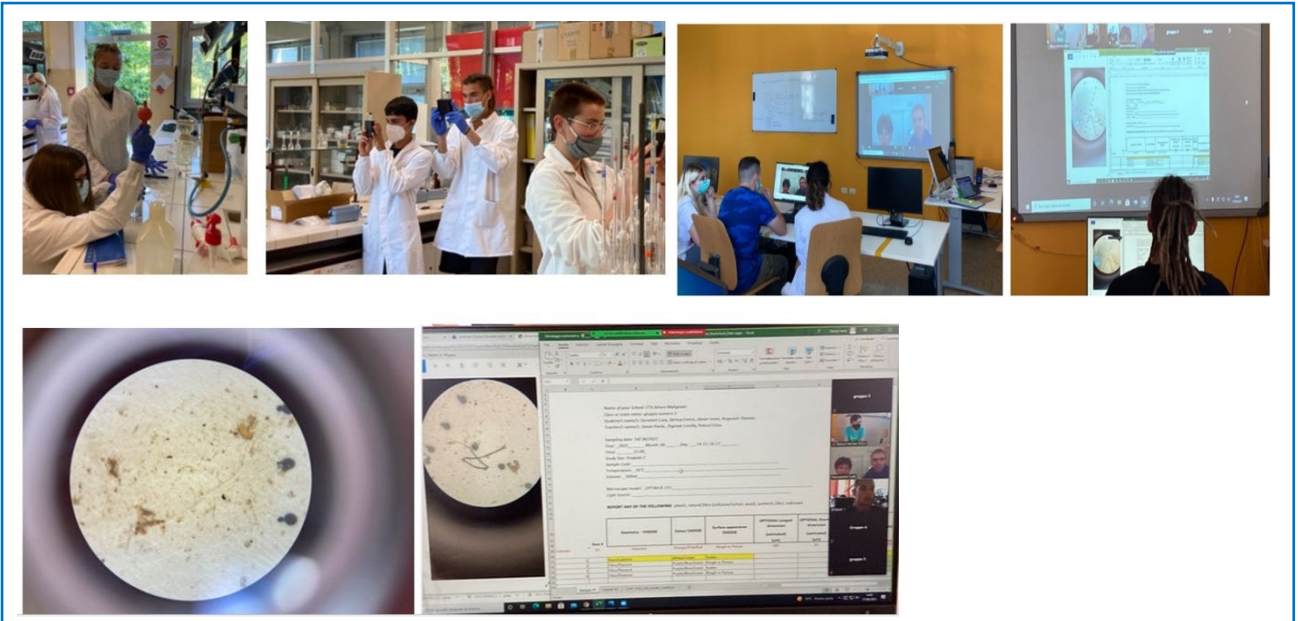


Figure 2

In addition to the waters analysis, the soils were examined (figure 3), the vegetation was detected (figure 4) for sample areas of land cover with Globe protocols, field tools (cylisimeter, tree calliper, metric cord, shovel, pH meter, redox probe etc.) and Apps (KeytoNature, soil colour capture, etc.). The environment of the park was analyzed in its complexity also from the point of view of fruition and accessibility.



Figure 3

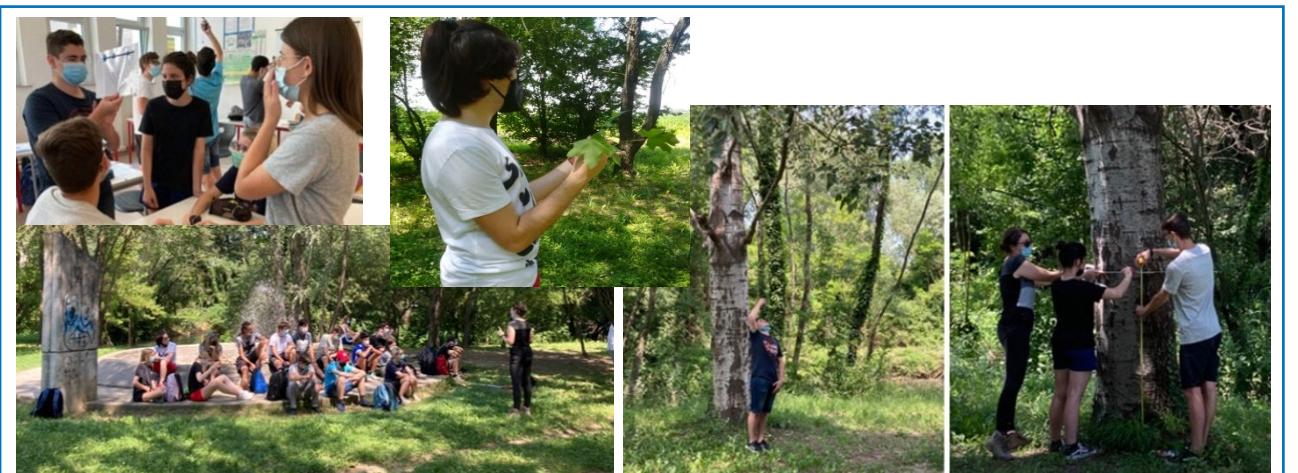


Figure 4

### **Pulchra project's connections with other international projects**

This year the innovative study on microplastics was added to test a new Protocol by Australia-Italy.

The experimentation on microplastics is coordinated internationally by the partnership between researchers A. Sutti and S. Robottom of the Institute for Frontier Materials, GTP Research Deakin University (Geelong, Victoria, Australia), and by the Globe Italia team that coordinates the Italian schools participating in the international GLOBE project for monitoring climate change.

The online meeting with Australia (figure 2) allowed students to understand the microplastics problem, discussing the data collected on Ausa river with Australian researchers and develop new ideas for developments of a new research.

### **Next steps**

After data processing, a meeting with the municipal administration to build the school-science-politics interactions that will see students among the active protagonists with their new planning and *Citizen science* proposals for citizens and territory.

*Lorella Rigonat*