

# ECOLOGICAL.LY PROJECT

## Enhancing biodiversity locally

The project was launched when ISIS Daniele Crespi participated in the Scuola 21 2012 competition organised by Cariplo Foundation. During a multidisciplinary learning strategy aimed at promoting active citizenship skills and increasing laboratory activities and groupwork, the two classes involved (2BL and 2CL from the language high school) were able to observe, survey and research the biodiversity of the territory and the changes taking place there, thanks to the presence of regional parks near the school. This information was cross-checked with data on the biotic situation of the city parks and the school garden, with the aim both of developing the awareness that individual citizens will have to face and solve problems linked to the use of resources by adjusting their daily behaviour in different environments and also of providing incentives for institutional intervention.

Phases in the two-year project:

First year: study of the territory

Phase 1 : exploring the topic

Phase 2 : problemization

Phase 3 : collection of essential data

Second year : planning of action to be taken to promote the territory

Phase 4 : activity

Study Plan (Phases 1,2,3)

Subjects involved : biology, chemistry, Italian literature, literature in foreign languages, historical geography

Phase 1 : exploring the topic

Activities

- Teacher training in planning and running project (provided by Insubria and Legambiente in partnership with Enaip for the "Vegetable garden on the balcony" project) - definition of teaching materials and intermediate and final tests – definition of types of observation and classification charts
- Project launch through the four phases of exploration with students involved in the planning.
- Student research into the characteristics of living beings and their classification into dominions and kingdoms.
- Presentation of food chains in graphs and preparation of educational DVDs and material for the school website which will follow each phase of the project and publish the results.
- Research, selection and exhibition of literary material (in Italian and foreign languages) dealing with the relationship between man and nature, the animal and the plant world – considering the reciprocal influences between nature and literature to narrate a cultural ecosystem
- Creation of a blog to share materials.

## Science teachers

- 1 Teacher-centred lesson to introduce general characteristics of living organisms and criteria for classification.  
Groupwork : students prepare videoclips / powerpoint presentations on dominions and kingdoms, choose and process information and images from textbook and Internet.  
Groups report to class.
- 2 Laboratory work : using an optical microscope, students observe, photograph, describe and compare organic mixes of elodea cells and oral mucus cells.  
Written report on each activity.
- 3 Information on soil characteristics provided by teacher; after observation of organisms present in soil samples using optical microscope, students look for information on the Net on identified organisms and make diagrams of trophic networks relating to soil organisms.
- 4 Teachers give students information about agricultural biodiversity presented during the training course for teachers by the agronomist Francesco Beldi and about biodiversity in general terms given by Prof. A. Martinoli from Uninsubria and Legambiente trainers.

This material provides students with ideas to develop the topic in different subjects.

## Italian teachers

Students explore the relationship between past and present of local customs, traditions and production activities in order to understand change and diversity in the ecosystem over time.

## Foreign language teachers

(Spanish) Groupwork : analysis of poems by various authors dealing with the relationship between man and nature.

## Phase 2 Problemization

### Activities:

- reflection on the distribution of local and global flora and fauna in view of climate analysis
- field trip to review and classify hundred-year-old trees in city parks
- updating of [scuola21ecologicamente.wordpress.com](http://scuola21ecologicamente.wordpress.com) blog to share the material produced by teachers and students on the school website [www.liceocrespi.it](http://www.liceocrespi.it), YouTube and Facebook

## Phase 3 Collection of essential data

### Activities:

- implementation of plant species in the school garden
- monitoring the varieties of animal species caused by the inserted biodiversity
- observation, description and classification of the flora, with ancient trees from the city parks (see phase 2)
- educational trip to Brabbia marsh to observe, recognise and classify some plant and animal species

- comparison, also in historical terms, of the three ecosystems – school, city park, regional park
- updating of [scuola21ecologicamente.wordpress.com](http://scuola21ecologicamente.wordpress.com) blog to share the material produced by teachers and students on the school website [www.liceocrespi.it](http://www.liceocrespi.it), YouTube and Facebook

Test on material produced and performance in preparation for phase 4.

#### Phase 4 Mother Earth

Subjects: biology, chemistry, earth science, Italian, foreign languages

Activities:

- choice and maintenance of a school green area (Teacher training in planning and running project provided by Insubria University and Legambiente staff and an agronomist in partnership with Enaip) - definition of teaching materials and intermediate and final tests – definition of types of observation and classification charts
- preparation of information charts on the characteristics and the care required for the plants in the school garden before and after the implementation
- creation of information sheets and identification tags, available to citizens, on the presence of 100-year-old trees in the town parks in conjunction with Busto Arsizio town council
- possible public presentation of work
- updating of [scuola21ecologicamente.wordpress.com](http://scuola21ecologicamente.wordpress.com) blog to share the material produced by teachers and students on the school website [www.liceocrespi.it](http://www.liceocrespi.it), YouTube and Facebook