



WATER PATHS

*Meet the history, landscape and biodiversity of
Mantova Northern Territories waterways*

CERESARA COMPREHENSIVE SCHOOL (Mantova, Northern Italy)



AIMS

- ▶ Reconstruct the relationship man-nature
- ▶ Develop attitudes of care, conservation and maintenance of historical-natural heritage
- ▶ To know and experience the symbolism of the river in the pictorial, musical and cinematographic fields.
- ▶ Investigate Nature and phenomena that characterize it with a scientific method



Preliminary Step: preparation of Environmental Education Science Lab (design and layout of spaces)

Images of the OPEN DAY: Lab activities

Class 5th Primary School - Class 3rd Junior Secondary





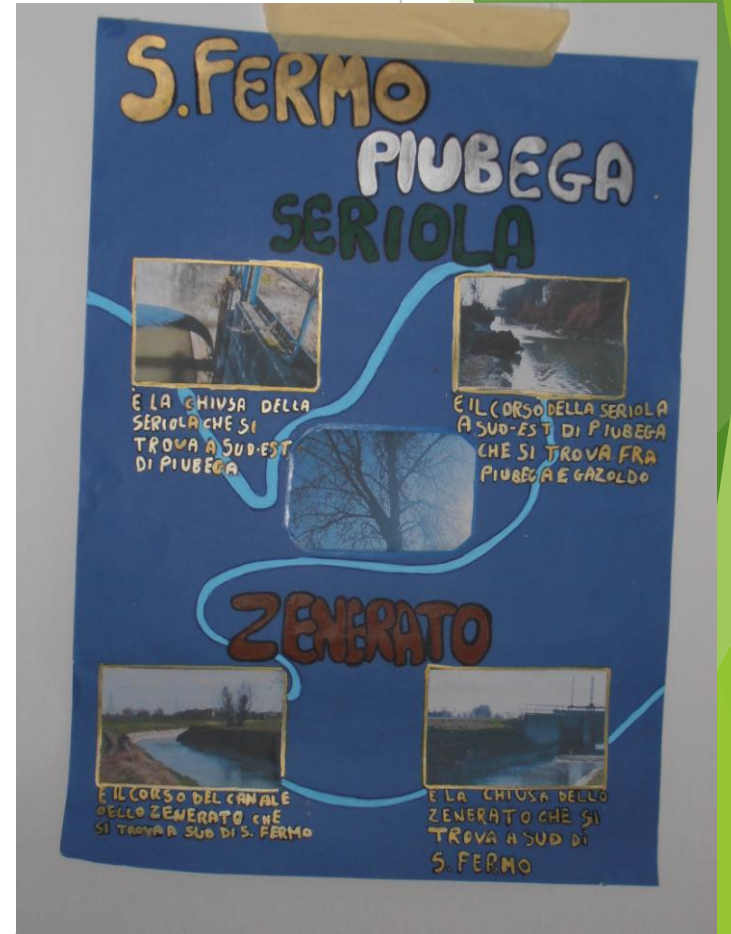
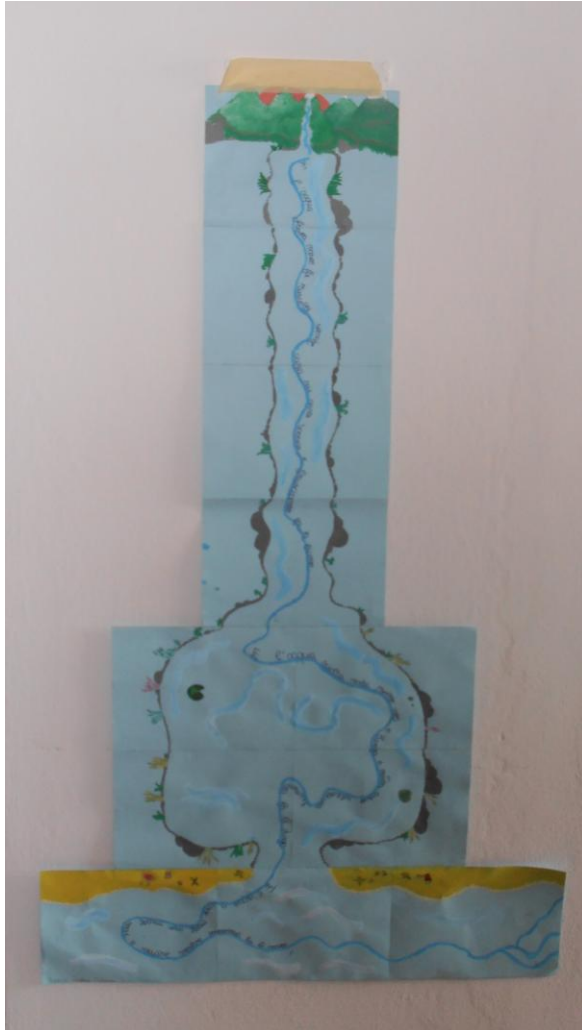
NATURALISTIC PLAN



1th Classes of Junior Secondary School in Piubega
Upstream «Seriola di Piubega» canal water sampling

- Upstream and downstream hydrography e water analysis of “Seriola di Piubega”, “Seriola Marchionale” and “Osone” canals
- Chemical /physical water quality monitoring
- Research and recognition of macroinvertebrates as bioindicators of the water quality class
- 1st Piubega Junior Secondary School Classes and e 2nd Gazoldo and Ceresara Junior Secondary School Classes





FLORA

Botanica Seta



È una pianta monocotiledone, della famiglia delle Papaveraceae. Il suo fusto è eretto e liscio, con foglie lanceolate e bordi ricoperti di peli. I fiori sono di colore giallo o rosso, con un diametro che varia da 2 a 5 cm. La pianta è molto resistente alle malattie e ai parassiti, e si riproduce per seme.



È una pianta monocotiledone, della famiglia delle Poaceae. Il suo fusto è eretto e liscio, con foglie lanceolate e bordi ricoperti di peli. I fiori sono di colore giallo o rosso, con un diametro che varia da 2 a 5 cm. La pianta è molto resistente alle malattie e ai parassiti, e si riproduce per seme.

FAUNA



Il Petrosso è un piccolo uccello canoro europeo molto comune. È molto attivo e si alimenta soprattutto di insetti. È molto resistente alle malattie e ai parassiti, e si riproduce per seme.



È un uccello molto comune, che si riproduce in grandi colonie. È molto resistente alle malattie e ai parassiti, e si riproduce per seme.

PIUBICHESI

PIUBEGA...



PIOPPO

È un genere di piante erbacee della famiglia Salicaceae. Le caratteristiche principali sono:

- Altezza: 15-20 m. (rari a 25 m.)
- Corteccia: liscia nei giovani esemplari e screpolata negli adulti.
- Fiori: piccoli e numerosi, riuniti in pannocchie.
- Frutti: acheni, piccoli e numerosi.



ONTANO NERO

È una pianta erbacea della famiglia Salicaceae. Le caratteristiche principali sono:

- Altezza: 10-15 m.
- Corteccia: liscia nei giovani esemplari e screpolata negli adulti.
- Fiori: piccoli e numerosi, riuniti in pannocchie.
- Frutti: acheni, piccoli e numerosi.

CARRUBE

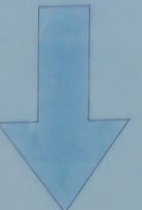
È una pianta erbacea della famiglia Tiliaceae. Le caratteristiche principali sono:

- Altezza: 10-15 m.
- Corteccia: liscia nei giovani esemplari e screpolata negli adulti.
- Fiori: piccoli e numerosi, riuniti in pannocchie.
- Frutti: acheni, piccoli e numerosi.

CORCOLO E SERIOLA



Il Corcolo è un corso molto lungo che nasce a Colomberola e termina a Mantova attraverso quasi tutta la Pieve.



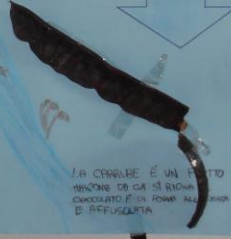
La Seriola è un corso molto lungo che nasce a Colomberola e termina nell'Adige a Mantova.



GLI AIRONI E I GRANCHI SONO GLI ANIMALI TIPICI DEI FOSSI!



IL TARASSACO È UNA PIANTA CHE SI TROVA VIGILE NEI FOSSI DEI CORSI D'ACQUA.



LA CARRUBE È UN FRUTTO MORTO DA CUI SI TROVA VIGILE NEI FOSSI DEI CORSI D'ACQUA.

Hydrography







Research and recognition of
macroinvertebrates as bioindicators of
the water quality class





Chemical /physical
water quality monitoring





Morphology of the water courses (Primary and Junior Secondary Schools Piubega)

The exhibition of the works produced, presented to the community

- Observation and recognition of native plants and shrubs (Kindergarten, Primary and Secondary Schools)
- Observation of the river ecosystems with recognition of riparian and aquatic vegetation. Field excursions driven by Naturalist Guides
- Publishing of the photos at INaturalist website, where teachers, who attended the BIOBLIZ Training Course, created the Ceresara IC Project "Waterways".
- Participation in the World Water Day 2017 in Mantova Town and the Earth Day 2017 in Castiglione delle Stiviere (Mantova Province)
- Participation in the Clean Up the World event

The Mincio Park Volunteer Ecological Guards meet the children of Casaloldo, Ceresara, Gazoldo and Piubega Kindergardens



PICCHIO ROSSO
SI ARRAMPICA
AGEVOLMENTE SUI
TRONCHI DEGLI
ALBERI FRA I QUALI
VIVE ABITUALMENTE
E DOVE TROVA IL
SUO QUARTIERE DA
LAVORO E INSETTI, IL
BECCO CHE USA PER
TORNARE SOTTO
LA CORTECCIA DEGLI
ALBERI E PER
DISTRIBUIRE IL NIDO
E' MOLTO ROBUSTO



MEET WITH “ECOLOGIAMO”

The consulting company MG Service offered meetings with schools on environmental sustainability. Meeting conductor: Mr. Andrea Lamberti.

These meetings were attended by: Classes 4th and 5th of Piubega Primary School. The kids have tackled the theme of ecological footprint in relation to the lifestyles of modern consumer society.



Excursions led by Naturalist Guides of the association “Per il Parco”. Primary Classes involved: 4th - 5th in Piubega, 2nd - 4th in Casaloldo, 2nd - 4th in Ceresara, 3rd - 4th in Gazoldo. The guides shown to children plants, flowers, herbs and animals of our countryside, who prefer to live along the banks of the ditches. During the activity pupils collected and named the leaves and flowers of the species sighted and then brought them back to school for the possible creation of a small herbarium.



Water samplig.
Subsequently, the samples
were transported to the
MA.D.E. Laboratory for
chemical-physical and
bacteriological testing.



The photos of the plant and animal species collected in the various excursions of the pupils of the Primary and Secondary Schools were published on the INaturalist website, where the teachers who had participated in the BIOBLIZ Training Course had created the Ceresara IC project "Water Paths".





- Piubega Primary School Classes taking part in the
- World Water Day (WWD) in Mantova (22nd March 2017) and the
 - Earth Day in Castiglione delle Stiviere (21st April 2017)



World Water Day in Mantova
22nd March 2017

“Save the water”: a game
proposed by Junior Secondary
School Piubega



**World Water Day in Mantova
22nd March 2017
Junior Secondary School Piubega**

Models of the Hydroponic Garden made in the school courtyard



World Water Day in Mantova
22nd March 2017
Junior Secondary School Piubega



World Water Day in Mantova
22nd March 2017
Junior Secondary School Piubega

WATER CYCLE: PLASTIC



World Water Day in Mantova
22nd March 2017
Junior Secondary School Piubega

HISTORICAL PLAN

Exhibition of old maps containing the structure of the old Piubega castle's track



World Water Day in Mantova
22nd March 2017
Junior Secondary School Piubega

The rivers' life



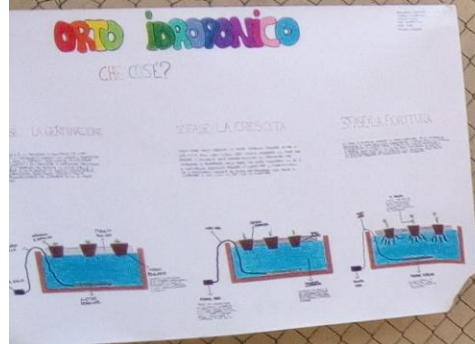
World Water Day in Mantova
22nd March 2017
Junior Secondary School Piubega



**"Blowing in the wind"
Installation: mobile
exhibition of student
diaries made during the
project "Water Paths"**

Junior Secondary School Piubega

The Hydroponic Garden made in the school courtyard: the garden hosts fishes



“Here we are at work!” - “CLEAN UP THE WORLD“ Day
Classes 4th and 5th Primary School and Classes 3rd Secondary School
Piubega

The boys walked through the streets of the village for the traditional waste collection.

Subsequently they took part in the contest called by Piubega Municipality "Ideas to make the world cleaner".



Hystorical Plan

Classes 4th and 5th Primary Chool and Classes 2nd Secondary School Piubega

- Meetings with Dr. Elena Lucca, coordinator of the archives sector for the Cooperative Charta in Mantova
 - Dr. Lucca illustrated the structure of the old Piubega castle's track through the analysis of ancient documents found in the historical archive of our municipality (Primary Classes) and
 - led the students in the study of ancient maps of the territory (Secondary Classes)
- Meetings with local experts in Local History



Excursion to Massimbona led by Naturalist Guides (Primary Classes Piubega)



Dr. Vignoli (S.I.C.A.M. company) meets Primary School pupils (Classes 4th and 5th Piubega, Classes 4th Gazoldo) and Secondary School students (Classes 1th and 2nd Piubega, Classes 1th Gazoldo, Classes 1th Ceresara).

Dr. Vignoli illustrates the history of Seriola Piubega, Seriola Marchionale and Oson water courses, speaking of their socio - economic importance, and also presented some ancient maps of the area that highlighted their ancient morphological conformation.



Meeting with Dr. IANES TIRABASSI, Archeologist

Classes 3rd and 5th Primary and Classes 1th Secondary School Gazoldo

- Dr. Tirabassi illustrated the “*terramare*” settlements close to Osone water course in Bellanda and Solarolo territories.
- Afterwards some classes of the Primary and Secondary Schools witnessed the opening of the exhibition "Antiquarium" where, accompanied by the archaeologist, were able to admire finds from prehistoric and Roman times.
- An excursion to the Bellanda territory was also made by 4th and 5th Primary Classes to investigate the site search for finds of these historical periods.



ARTISTIC PLAN

Some works of the artistic activities

