

# Science CLIL - Water and marine ecosystem

*The aim of this project is to teach a subject, science, using a foreign language, as a vehicle and the CLIL methodology (Content and Language Integrated Learning). Content and Language Integrated Learning, or CLIL, intends to teach a subject in the target language rather than the first language of the learners. In CLIL classes, tasks are designed to allow students to focus on and learn to use the new language as they learn the new subject content.*

Methodology and integrated approaches to CLIL: The educational approach uses the contributions of education for problem solving and the methodology of cooperative learning.

Students work in pairs and in groups both in research and in formative assessment. Working in groups, the work will apply the interdependence of roles and the gap in information. By way of teaching aids, lessons in co-CLIL project will take place in the classroom, a multimedia classroom or in a laboratory.



Water physical analysis



Running dictation

The project is integrated with the overall design of the teaching faculty of DNL and there are stages of observation and research in curriculum time with educational visits to the beach to observe the marine environment.



Instruments



Water temperature



Directions-intensity wind



Bird watching



Fossil coast



Chemical analysis



Working in group



Griffone (Gyps fulvus)  
Native in Sardinia



Uccello delle tempeste  
(Hydrobates pelagicus)  
Native in Sardinia



Berta Maggiore  
(Calonectris diomedea)  
Native in Sardinia

Courtesy of professor Giuseppe Dellitala  
from the faculty of science, University of Sassari

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The rating will serve to differentiate the assessment of content knowledge and those relating to the LS. Ongoing: Model of Short will be used as it allows the separation of language from content during the evaluation. A checklist will be used while the students working. Cards and anecdotal observations are completed by the teacher while the students are completing their work, short reports and interviews.



Water transparency



Observing endemic plants



Cistus incanus

Language Transversal, environmental education: raising awareness of the relationship between man and environment; the sea as a source of energy resources, some pollutants and their causes, the most polluted sea areas of the Mediterranean Sea, some recent natural disasters caused by sea. Content: Ecosystems, biotic and abiotic factors of an ecosystem, the sea and coastlines, water as a solution, marine life, the movements of the sea.



Working in site



Crucianella Marittima  
Courtesy of professor Ignazio Camarda  
from the faculty of agriculture,  
University of Sassari



Gariga - Centaurea horrida  
Endemic Sardinian  
Courtesy of professor Ignazio Camarda  
from the faculty of agriculture,  
University of Sassari



Is Arenas - Asfodelo, Silene sericea

Goals to be achieved. Content - general characteristics of an ecosystem; learn how to identify an ecosystem, how to recognize and classify the main features and internal relationships. Knowledge of a specific ecosystem, the sea. How to recognize the physical and chemical characteristics of water and the beach; ability to calculate the salinity, temperature and transparency of seawater; how to recognize and classify marine organisms in the marine environment object of the research.