



Geoschools - Teaching geosciences in secondary schools

Georgia Fermeli (1), Fritz Steininger (2), Guillermo Meléndez (3), Michael Dermitzakis (1), Amelia Calonge (4), Carolina D'Arpa (5), Carolina Di Patti (5), Anastasia Koutsouveli (6), Carlos Neto de Carvalho (7), and Joana Rodrigues (7)

(1) Dpt. of Hist. Geology and Palaeontology, Faculty of Geology and Geoenvironment, National and Kapodistrian University of Athens, Panepistimiopolis, 15784 Zographou, Athens, Greece, (gfermeli@geol.uoa.gr, mdermi@geol.uoa.gr) , (2) Krahuletz Museum, Eggenburg, Austria, (Fritz.Steininger@senckenberg.de), (3) Dpt. of Earth Sciences (Palaeontology), University of Zaragoza, Spain, (gmelende@unizar.es) , (4) Dpt. of Geology, Faculty of Sciences, University of Alcalá de Henares, Madrid, Spain, (a.calonge@uah.es), (5) University of Palermo, G.G. Gemmellaro Geological Museum, Italy, (cdarpa@unipa.it, dipatti@unipa.it), (6) Committee of Geosciences Didactics, Athens, Greece, (geodidactics@gmail.com, tessyk@otenet.gr), (7) Naturtejo European & Global Geopark, Castelo Branco, Portugal, (carlos.praedichnia@gmail.com, joana225@sapo.pt)

GEOschools is a European Union project supported by the Lifelong Learning Programme. The main target of the project is to define a “Framework on geosciences literacy principles” for the general European citizens, to be applied at least, for the revision of obligatory school curricula for secondary schools for the participant countries. Main aims of the project are: a) bridging the gap between scientific knowledge and school knowledge in geosciences; b) increasing the knowledge of teachers and the ability of students in valuing and appreciating geosciences; c) improving educational skills of Geosciences in European school environment; d) establishing and sustaining a consortium on research and initiatives on Geosciences didactics; and e) supporting Education for sustainability.

The key areas to be addressed in the development of the project are:

-Curriculum comparison research

Curriculum comparison research is based on the review of the geological content of curricula in secondary schools from Austria, Greece, Italy, Portugal Spain and members of other European countries. Besides comparing curricular contents, the research should also focus on the analysis of geological contents in secondary school textbooks, based on a detail review of the amount and quality of the information given to students. The ultimate goal is to find effective ways of engaging students and geosciences teachers in a new learning approach, and placing Geology at the same level of other sciences in secondary schools.

-Interest Research

Interest Research seeks to understand the best teaching tools to foster student interest for geosciences. The research is based on quantitative analysis of questionnaires distributed to at least 20 teachers, and filled in by 600 pupils, in each country.

-School Geosciences Dictionary

The main focus of this key area is to create an illustrated online Geosciences dictionary especially prepared for teachers and pupils from secondary school. This dictionary must be comprehensive for all the disciplines of geosciences but targeting the curricula of secondary schools under study, i.e. accessible for children and keeping an easy level of understanding. A special attention is set on the accompanying graphic material for every term, which should be easy to include, as it will be a virtual dictionary.

-Subject Teaching Modules

Teaching Modules pretend to apply, as a teaching tool, the results obtained from research by creating working tools and key concepts. Teaching geosciences in the field is an obvious topic when students are taken to visiting geoparks, museums, relevant field points (geotopes) or geosites, but also in schools surrounding urban areas.

Teaching geosciences in connection with other disciplines will gather Archaeology, Geography and Arts. As well as teaching geosciences in the classroom.

The activities of the project and its deliverables will be presented and disseminated by a dynamic multilingual web site (English, German, Greek, Italian, Portuguese, Spanish and eventually French). As well as an e-Newsletter will spread the news of the project every four months, getting closer to the teachers involved in the project and all the interested people.