THE#FOSSILSEACHALLENGE: AN EXCITING PROPOSAL FOR SECONDARY SCHOOLS PROMOTING THE DOLOMITES UNESCO WORLD HERITAGE

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We present the results of the first edition of an educational and scientific dissemination project (The#FossilSeaChallenge) focussed on the geology of the Dolomites, which were listed by UNESCO as a World Heritage Site for the aesthetic value of its landscape and for the scientific importance of its geology and geomorphology.

We believe that a better knowledge of the Earth Sciences and in particular of the Geology of the Earth, in terms of formation and evolution processes, specific features, and geological legacy, is fundamental to improve people understanding of the functioning of the physical world and, most of all, of the potential impacts that human activities can have on the environment we live in. This is even more relevant in the case of young generations and students. Solid scientific bases are a key asset towards a better quality of life and a more sustainable future.

In this framework, the aim of The#FossilSeaChallenge is to promote knowledge of the Dolomites World Heritage Site through the design and realisation of research/dissemination projects developed by students in upper secondary schools (ISCED level 3) located in the UNESCO-designated area. Student projects can be in a variety of forms, including experimental and field research, desk studies, dissemination activities, as well as artistic and recreational activities. The objective is also to promote among young people a better appreciation of the World Heritage Site, its exceptional geological importance and the extraordinary beauty of its landscape.

The#FossilSeaChallenge is organised by the "Geological Heritage" and the "Education and Scientific Research" Networks of the UNESCO Dolomites Foundation. The Autonomous Province of Trento is tasked with coordinating the two Operating Networks. The organizing committee and the jury is integrated by personnel of the Autonomous Province of Trento, MUSE Science Museum of Trento, University of Trento, and UNESCO Dolomites Foundation.

The challenge works on a yearly basis, with different specific themes for each edition. The first edition was set up in 2017, and the students projects were completed by May 2018. The specific theme of the first edition was "The Dolomites and Water". Water has several different connections with the Dolomites, ranging from the formation of the rocks in a marine environment, the erosion processes at the valley scale and the river network, the karstic chemical dissolution.

Eight schools participated to the challenge, involving the work of about 150 students, and presenting valuable and diverse works. The relatively open challenge allowed the students to propose largely different projects, carried out with innovative and alternative tasks. Activities ranged from the organization of conferences, execution of lab experiments, design of gadgets and advertisement material, creation of movies, posters, murals, fantasy tales, computer games. All the projects extensively used multimedia and information technologies, as well as multiple languages, highlighting also the cultural diversity of the Dolomites area. Many proposed to emphasize the role and presence of specific geological sites and thematic geological paths as a form of dissemination.

Water has been analysed also as essential element for human life, relating it with the highly topical and worldwide relevant themes of environmental pollution and climate change. The great Pacific Garbage Patch have been compared to the coral reefs of the Triassic where the dolomites rocks originally formed.

Students awarded for the best projects were invited to spend two days in a mountain hut in the Dolomites. Figure 1 shows the group of students at Torre di Pisa during summer 2018.

The#FossilSeaChallenge is now in its second edition, addressing the theme "The Dolomites and Fire". Traces of "Fire" are nowadays visible inside the multitude of different rocks forming the Dolomites. Along with the carbonates, many magmatic rocks intrusion and rare minerals contribute to the geological variety and relevance of this site. Fire is one of the major endogenous forces, which forms and continuously reworks the basic geological elements. But "Fire" may relate also to many human (and more recent) activities. Students are presently working on this new challenge and we are looking forward to their ideas and points of view.

The#FossilSeaChallenge provides a new framework that could be used by different local and institutional actors (e.g., Geoparks), where students and young people in general have the possibility to get directly involved in scientific and environmental issues. This activity has therefore the twofold objective of improving young people awareness of geological topics as well as taking an active role in the dissemination of the environmental and cultural relevance of sites like the Dolomites World Heritage.

FIG. 1: The students winners of the first edition during the excursion at Torre di Pisa.

REFERENCES

The#FossilSeaChallenge website: http://www.dolomitiunesco.info/attivita/the-fossil-sea-challenge/?lang=en

Geological Heritage Network of the UNESCO Dolomites Foundation website: http://www.dolomitiunesco.info/?reti-funzionali=rete-del-patrimonio-geologico-e-geomorfico&lang=en

Education and Scientific Research Network of the UNESCO Dolomites Foundation website: http://www.dolomitiunesco.info/?reti-funzionali=rete-della-formazione-e-della-ricerca-scientifica&lang=en