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ABSTRACT BOOK

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S32. Geosciences at school 2024

The dissemination of Marine Geosciences in schools as a contribution to the Ocean Literacy process: from teachers' training to hands-on activities

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Widespread environmental education is essential to meet the challenges of an increasingly interconnected planet whose future is at stake. Since we have just entered the UNESCO Decade dedicated to Ocean Sciences for Sustainable Development, Ocean Literacy (OL) is a way to link marine science with education for sustainability through the promotion of behavioural change and the adoption of a systems approach to marine environmental issues. The role of schools is therefore crucial in acquiring and strengthening environmental knowledge, skills, and competences, educating the citizens of the present (teachers) and those of the future (pupils). However, teachers' involvement is necessary to achieve the goal of bringing OL into the European school system in the short and long run. Therefore, to engage teachers and keep them engaged on this topic in the coming years, there is a need to combine traditional and innovative teaching methods and educational tools in integrating the content knowledge (CK) on ocean science issues, mainly lacking in the primary school, with the pedagogical one (PCK), often not considered in the secondary school. During the last 4 years, several EU projects and initiatives were dedicated to bringing OL to school (e.g., BlueS_MED, BlueNIGHTs, BlueMinds4Teachers, EMSEA, EU Blue School Network). Thanks to this, a permanent multidisciplinary working group where scientists, teachers, and young ocean ambassadors can fruitfully and continuously interact was formed. Long-lasting educational communities (Mokos et al., 2022), as well as quality, modern, and innovative educational materials and tools (Alvisi et al., 2022; Cheimonopoulou et al., 2022; Koulouri et al., 2022), were built and consolidated, giving birth to innovative teachers' training and school activities. Some of the best practices developed will be presented and discussed, including:

1. the open-access online course and digital toolkit developed as part of the BlueMinds4Teachers project () that provide teachers and educators with materials and tools, relevant references, resources, and links;
2. the practical seascape activity entitled "How deep is the sea? Discovering the underwater territory". The aim is to familiarise oneself with the 'land beneath the water' by building 3D models of sea and ocean basins using simple techniques and low-cost materials;
3. the hands-on activity on the water cycle "Water Pathways". Its aim is to: a) discover the link between water and climate and the elements needed to build the water cycle in different climatic contexts, b) explore the physical processes that transport water across continents to the sea and c) find the "water numbers" through the dedicated "Water Quiz";
4. the hands-on activity + guided tour "There's wall and wall! " to discover the link between the building materials of our historical centres, often of marine origin, and the geology of the surrounding areas.

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