Bringing the Ocean closer: an example of how to bind Research and Education and Outreach

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Both scientific knowledge and the understanding of what science can really offer to society have not been brought effectively to the general public until relatively recently. Therefore, science was and is still seen as an activity which is relatively unrelated to the daily life of the man in the street. The most important challenge science faces today is, precisely, to become part of everyday’s cultural and leisure activities. Yet, the vast majority of the ways of popularising Science are based on passive activities, methods and products, rather than appealing to an active participation of the public, especially students, which should be a target public.

We are currently developing an Education project, which has been tested during the previous years as a pilot project, and which aims to provide a series of activities and didactic materials about marine topics in order to include them in the educational programmes of schools, i.e. it aims to diversify pedagogic resources considering the lack of models and subjects about marine topics in the Spanish secondary school education. This project pretends, moreover, to enhance consciousness about environmental topics, to promote scientific vocations and learning, to bring science closer to students and to provide teachers with new and current materials which they may use in their daily lessons. Together with teachers, researchers have developed and will develop a series of educational materials and activities in order to accomplish the objectives of the project. These educational resources include experiments, enigmas, workshops, videos, games, texts, and fieldwork. All this resources and also the gathered information and results of the experiments performed by students will be centralised in a webpage, where students and teachers will be able to download the materials and keep in constant touch with both scientists and students and teachers from other schools. Apart from this, a second step in the project will be the development of a set of materials which are more difficult to obtain and which schools will be able to temporary borrow. Further, the materialisation of all these contents and activities into a travelling lab is also pretended. During the whole project, the advice and evaluation of the materials by teachers has been and will be constant: scientists and teachers must work together in order to develop the most adequate materials.

Examples of the contents of the project are studying the succession of organisms and communities in the sea by preparing colonisation experiments, studying the diversity in the sea through the collection and analysis of plankton samples, studying plankton vertical migrations, or the formation of interphases in the sea, as well as trophic interactions and the formation of beaches, among other topics.