



## **A lesson from science in polar extreme environments: ethics and social values for primary school**

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One of the relevant objectives of the researchers should be filling the gap between the scientific research and the school. Such objective should be pursued methodically, through commitment, foresight and cooperation. In this frame the idea to communicate and to share the experience of the scientific research in Antarctica with the public and with the school is a challenge that a team of INGV researchers, engaged for many years in scientific missions in Antarctica, carries on with great enthusiasm within the several outreach activities of the Italian National Program for Antarctic Research (PNRA).

The outreach activities, aiming to disseminate the knowledge and the culture of the polar regions, have been mainly addressed to a public of adults and students of the secondary school (11-19 years). Recently, the researchers matured the need to realize outreach paths addressed to pupils of the primary school (8-10 years), taking the advantage of the multidisciplinary themes offered by the Antarctic research.

The present work reports the experience of the outreach laboratory “On a mission to the South Pole”, realized in the frame of events organized by INGV (ScienzAperta 2012 e 2014) and dedicated to the primary school.

The educational themes developed within the laboratory concern the research in Antarctica, with particular focus on the human aspects, the geophysics and the progress of new technologies. The innovative aspect of the laboratory stands in the strategy to deal with Antarctica with an educational aim, proposing Antarctica as a natural laboratory, not only from a scientific point of view, but also as a laboratory of shared human experiences.

The didactic path, based on interactive methodology that uses the role-play and the experiential activities, enable the children to acquire the knowledge on Antarctica (knowledge); to explore the Antarctic characteristics as a natural laboratory and to experiment an emotional education through individual and team experiences (doing); to develop civics path linked to “sense of belonging and citizenship”, that will make the children aware that Antarctica does not belong to anyone but it belongs to everybody: it is a common and unique good (being).

The proposed work is an example of how it is possible, by means of educational paths, promote and support integration values between human beings and nature also in extreme environments as the Antarctic continent.