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

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1 Geotechnics in the Polar Sciences

Geotechnics is a discipline centered on the study of soil mechanics to observe the presence of landforms to be detected in the context problems of the human environment, using soil samplings suitable for the territory and for the specific geology. The presentation of the polar sciences topics, one of the courses of the Earth sciences cycle, represents a unique opportunity, not only for its importance, multiplicity, and values of the pole researches, but also for the experimental, historical, ethical and social values as well. This lesson is organized by the researchers of the INGV Earth Sciences Pole of Rome, the Department of Earth Sciences in Rome, and by the research stations located on the Italian platforms in the polar regions.

3. The preparation

The activity is based on the preparation of an educational project that the teachers can perform with the students of primary school in order to give them a scientific and educational vision of the polar environment. The project, the organizational and the educational contents are focused on the ethical and social values of the children that live in the polar regions. The project is designed to provide a scientific vision of the polar environment and to emphasize the ethical and social values of the polar science mission.

6. The teleconference with Antarctica

The computer simulation allows the children to face the role of the scientist and to make the interaction with the scientists of the Italian station in Antarctica. The children can observe the typical conditions of the Arctic and Antarctic, such as the climate, the landscape, and the wildlife. The children can then prepare a report on the activities of the scientists and the importance of the mission.

5. The life in the base and the scientific missions

The life in the base and the scientific missions is based on the activities of the scientists of the Italian station in Antarctica. The scientists live in the station and carry out scientific missions in the polar environment. The children can observe the activities of the scientists and the importance of the mission.

7. Evaluation of the laboratory

The evaluation of the laboratory is based on the scientific and educational contents of the project. The children can observe the ethical and social values of the polar science mission and the importance of the mission. The children can then prepare a report on the activities of the scientists and the importance of the mission.

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