

VIEWS OF GEOSCIENCE AND PHYSICS STUDENTS ABOUT THE EARTH'S MAGNETIC FIELD: IDENTIFICATION AND IMPLICATIONS FOR TEACHING

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This paper results from the development of a research project which is being carried out at the University of Aveiro in Portugal, with the participation of both geoscience and physics educators and physicists. The main assumption of this project is that, from a constructivist point of view, science teachers have to take into account students' views about the science concepts to be taught. This aspect is still much more important when complex and relevant science concepts, such as the earth's magnetic field (e.m.f.) are under discussion. This is a concept playing an important role, although by different reasons, both in geoscience and physics education. While geoscience students are particularly concerned with the influence of the e.m.f. in the rocks, physics learners are more concerned with the concept itself, for instances, its nature and origin. The authors of this paper assume that the differences referred to above, may be reflected in different conceptions held by geoscience and physics students about the e.m.f. To analyse this assumption, a written questionnaire was designed and administered to a sample of c. 400 undergraduate students of different Portuguese universities. Some of the ideas revealed by the students are not far away of those which have been claimed by the scientific community throughout time. So a set of different readings, supposed to be appropriate for geoscience and physics students, will be prepared. The main purpose of these materials is to facilitate the respective cognitive conflict. During the presentation of the paper, results and details of this study will be given. *This work has the financial support of the Project PRAXIS XXI and the Research Unit Didáctica e Tecnologia na Formação de Formadores