

Teaching Geology in Sé school: some examples of practical activities

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Abstract

The Geology teaching and learning processes should be carried out through the interaction of different learning environments, inside the classroom and outdoors. Practical activities are a methodological strategy widely suggested by the Portuguese Ministry of Education for the Geology teaching whose aim is to promote the development of skills (knowledge, ability and attitudes) denying the idea that the subjects of this science are complex and far from the students' academic interests and needs. This work presents some formal and non-formal education practical activities (e.g. laboratory and fieldwork, mineral fairs, national contests), developed throughout the last year in Sé School, a small school in the north of Portugal, with students of the different grades (Kindergarten to high school).

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Introduction: the Geology teaching and learning processes should be carried out through the interaction of different learning environments, inside the classroom and outdoors. Practical activities are a methodological strategy widely suggested by the Portuguese Ministry of Education for the Geology teaching whose aim is to promote the development of skills (knowledge, ability and attitudes).

Goal: to present some formal and non-formal education practical activities developed throughout the last year in Sé School with students of the different grades.

Participation on the Side-event GEOETH&GWM'19

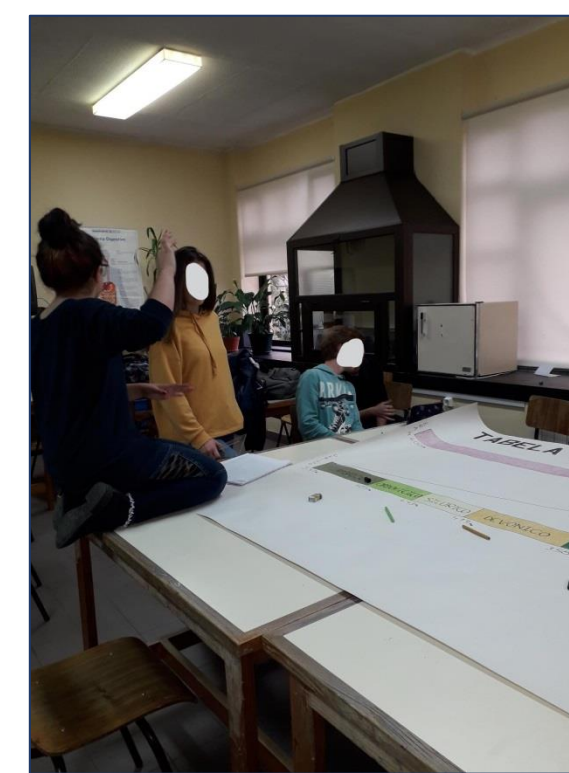
Integrated on an educational Side-Event to the GEOETH&GWM'19 congress - an international meeting that will take place in Oporto on the next October -, 10th grade students made a short digital video for a contest covering issues related to groundwater. They created a history where a young person learns and acquires awareness of sustainable behaviours to be adopted to prevent contamination of groundwater.



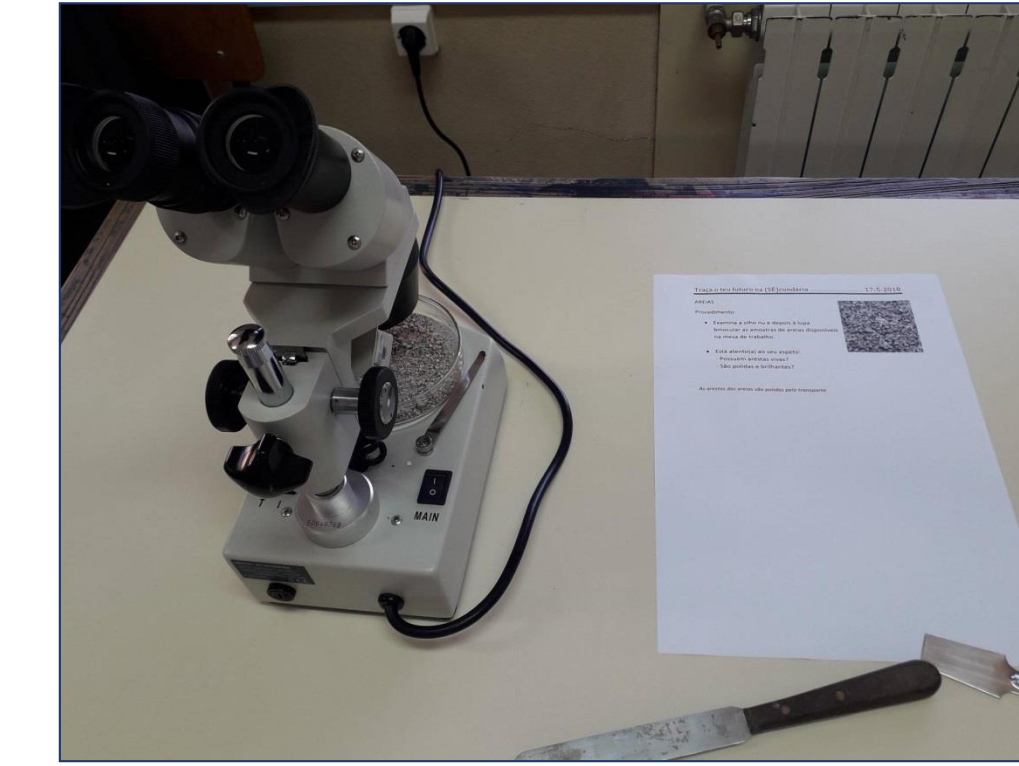
Drawing a geologic time scale



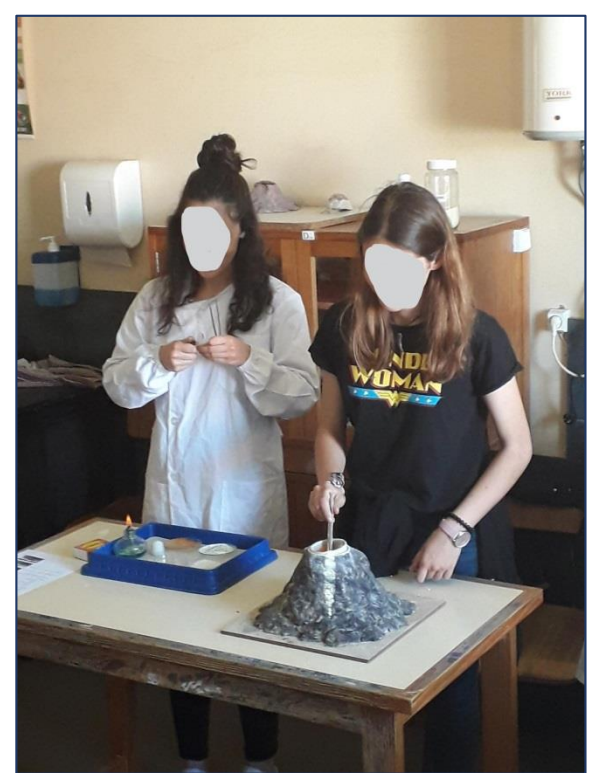
High School (10th grade) students drawing a Geologic time scale, when they studied the History of the Earth issue.



Open Lab day



Under the supervision of their teachers, high school (10th and 11th grade) students planned and carried out some activities for middle school students (9th grade).



Commemorating International Geoethics Day



On 18th October 2018, some sciences high school students (10th and 11th grade) accepted the challenge of the International Association for Promoting Geoethics and answered to the question "Geoethics is...".

Simulation of a volcanic activity



At Natural Sciences class, middle school students (7th grade) simulated explosive and effusive volcanic activities.

Elementary school students at high school laboratory



Fieldwork activity



The fieldwork activity at the Santa Helena mountain, a local near school, adopted the Orion model guidelines - a pre-trip, a trip and a post-trip. High school students collected samples in the field and later analysed and studied those in the laboratory.

Elementary school students (3rd grade) visit high school sciences laboratory to learn about the minerals and family rocks. They put their hands-on and identify some rocks and their uses. These activities were done in partnership with Pombal (Portugal) elementary and middle school teachers.



Portuguese Geology Olympiads

Several 11th grade students were participated at the school round (first phase) of the Portuguese Geology Olympiads, a national contest about Earth Sciences issues. Afterwards, three of them represented the school at the north regional round (second phase).



Kindergarten students visit mineral fair



Young kindergarten students (3 to 5 years old) visited the mineral fair and had the opportunity to learn about the work of a geologist and local geology. Later, they were defied to drawn about their experience.

