



How to teach Earth Sciences to students older than 55. The GeoGrans project from the NauGran at the University of Valencia.

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Teaching Earth Science is always a challenge, as broad ideas have to be explained in small rooms. How to teach earth science to students that have access to the university after the age of 55 is even more difficult. This was the challenge that we accepted during the year 2005-2006. Students were diverse with respect to their previous knowledge. They ranged from those with only basic education (until the age of 14) to well educated students such as university professors, physicians or engineers. These students are enrolled in what is called the NauGran project in the University of Valencia. They follow diverse topics. In 2006, we developed the course in Physical Geography for 70 students. The first three weeks were a fiasco, as the different prior knowledge levels of the students made it impossible for some of them to follow the lectures. The successful strategy we have developed since then is to base our teaching on field work. Every lecture is related to some visits to the field. A pre-excursion lecture introduces the key questions of the study site (hydrology, geology, botany, geomorphology. . .). During the field work we review all the topics and the students are encouraged to ask and discuss any of the topics studied. Finally, a post-excursion lecture is given to review the acquired knowledge. In this last lecture it has been found to be relevant to introduce the main comments of the students. One example of how our strategy works can be illustrated by the groundwater resources exhaustion topic. The students need to know what an aquifer is before listening a lecture on this topic. However, af-

ter visiting some springs, seeing different types of rocks (permeable and not), visiting wells and irrigation systems based on pumped water from the aquifer, they are ready to understand a lecture on the groundwater and water resource management.