



## **Making it obvious – How an entire School was introduced to Climate Change Research**

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Will plants grow faster and larger in a future warmer and CO<sub>2</sub>-enriched climate and if they do will they be able to compensate for increasing atmospheric CO<sub>2</sub> concentrations by storing carbon in their biomass ? This question was tackled by a team of the University of Innsbruck and the teachers and pupils from the Anton-Auer Secondary School in Telfs, Austria.

After a general introduction on the causes and consequences of climate change for all participating pupils, the younger pupils built two open-top chambers, which were used in the experiment to simulate future climatic conditions. The older students were introduced to scientific working and how to set up a scientific experiment: They learned how an experiment is structured, what a control group is and why it is needed, which parameters have to be measured and so forth. For curriculum reasons, the project was run in autumn and therefore lettuce was chosen as study object, because it usually grows fast even at that time of the year. The pupils separated the plants into two groups - one which would grow under expected future conditions of higher temperatures and CO<sub>2</sub> concentrations inside the open-top chambers. The other group was exposed to current climatic conditions. To see whether nutrient status influences the outcome of the experiment each group was subdivided into plants provided with and without additional nutrients. The participating pupils observed and measured these plants on a regular basis over a period of four weeks. While the “young scientists” did their investigations they were closely observed by their school mates, because the investigation area was set up in the school yard. This scientific investigation not only occupied the students involved, but caught the whole school’s attention to this unusual project. After four weeks, plants were harvested, oven-dried and weighed. Finally the pupils anal-

ysed their data and created graphs and figures for the final presentation, after which the students discussed their results with their teachers and the university team. The outcomes of the project were finally presented to the entire school by the pupils themselves using different sorts of presentation methods such as posters and power point presentations. This part of the project was designed to encourage students to present results using their own words. The audience who had not been directly involved in the project had the advantage to get scientific information in the familiar language of teenagers. Although the topic was a great challenge for pupils of that age group, they had been offered the opportunity to get into contact with the nature of science. A new OECD study has shown that positive contact with science and technology at a very early age can have a long lasting impact. In a feedback discussion at the end of the project, pupils expressed that they experienced scientific research to be very interesting and great fun. They also mentioned that they would love to do such a project again, although it required some effort to bring the whole project to an end.