

Sparkling Science >
Science linking with School
School linking with Science

Project Outlook, December 11th, 2008

Searching for footprints of climate in classrooms!

LEADING INSTITUTION

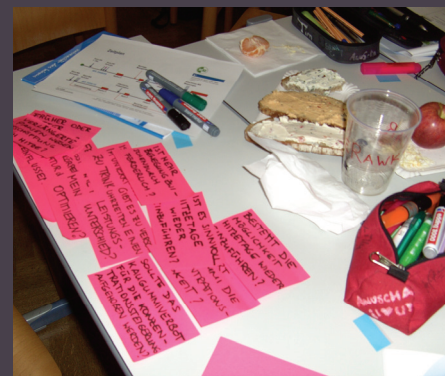
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SCIENTIFIC CO-OPERATION PARTNER

Medical University of Vienna
Centre of Public Health
Institute for Environmental Hygiene

SCHOOLS INVOLVED

GRg 23, Vienna Bilingual Schooling
Draschestraße, Vienna
GRg 4, Wiedner Gymnasium
Sir-Karl-Popper Schule, Vienna
BG Rechte Kremszeile, Krems



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Austrian Federal Ministry of
Science and Research

Searching for footprints of climate in classrooms!

High school students, teachers and scientists investigate climate conditions in classrooms looking for correlations between heat and student's concentration abilities

"Heat affects my concentration ability", this subjective "knowledge" will be investigated by three schools:

GRg 23/Vienna Bilingual Schooling, Draschestraße (Vienna),
 GRg 4/Wiedner Gymnasium/Sir-Karl-Popper-Schule (Vienna) and
 BG Rechte Kremszeile (Krems, Lower Austria)

together with

the Institute of Meteorology of the University of Natural Resources and Applied Life Sciences, Vienna,
 a psychologist and
 the Institute for Environmental Hygiene of the Medical University of Vienna.

The hypothesis "There is a correlation between heat and concentration abilities that can be measured" shall be proved by collecting sufficient data.

We spend 90 % of our time indoors. The expected raise of temperature due to climate change will make heat to a problem that will be more and more increasing, especially in the summer term. Heat in classrooms is a current problem for all three schools which are participating the project. Mrs. Pober, teacher at the school in Draschestraße gets to the point: „Ten minutes in our biology room are sufficient motivation to participate in this project“. There are concrete expectations in the BG Rechte Kremszeile, as well: „Our school will be completely renovated in the next years. From this project we expect concrete information and data that will definitely help to improve the heat stress especially in those rooms oriented to the south“, explained Mr. Dorn.

In the winter term 2008/09 the extensive measurements which will be carried out in the summer term 2009, will be prepared. One Kick-Off-Meeting for the teachers already took place as well as Kick-Off-Workshops together with the students in each school to give an introduction to the thematic area heat and concentration ability and to plan the following research activities.

Sonja Mielczarek (6a, BG Rechte Kremszeile) mentioned to the project: "I expect concrete measures that temperature won't fluctuate so much any more." Olivia Engelbrecht and Christoph Messerer (6a, BG Rechte Kremszeile) confirm this prospect: "We expect a clear result that shows that the learning aptitude is affected by temperature."



The most extensive phase of the project will be the summer term 2009 when all the measurements will take place. To answer the research question indoor climate will be measured in several classrooms and the faculty rooms during the summer term. Approximately once a week students will make tests of attention during the lessons that last only four minutes each. These tests deliver values as a measure for the actual concentration ability. Additionally students work out what factors affect the ability of concentration aside from heat together with the scientists. Those factors shall be documented as well. The plan is to make the real time data measurements, carried out in the classrooms, available in the word wide web.

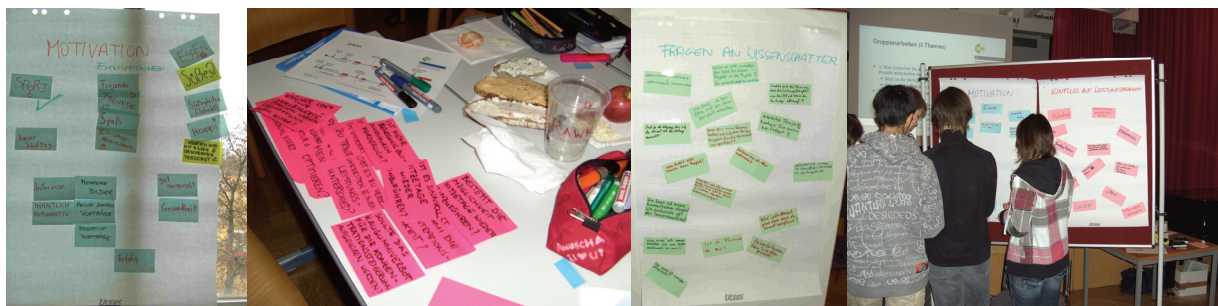
In addition to the scientific work students will get to know each other and visit the other schools and go on scientific excursions. In this regard Mrs. Forstreiter of BG Rechte Kremszeile feels confident that: "Pupils get the chance to go beyond their "every day life at school" and to broaden their horizon by visiting other schools and the university"


About 140 students from three schools will collect data together with scientists and teachers during the summer term. These data will be analysed in the winter term 2009/10. The findings will be used to search for simple measures that are easy to realise and which improve the indoor climate and the ability of concentration without needing additional energy.

Mrs. Maier, biology teacher at the Wiedner Gymnasium describes the additional benefit of the project aside the scientific results as follows: „It is interesting, that students get the personal experience how research works – by collecting data, hypothesising and analysing.“ Even pupils expect more than scientific results as one male pupil from the Gymnasium Draschestraße wrote after team working at the Kick-Off-Workshop: "I want to figure out if I am qualified for research work and if I like it respectively."

In this project the scientists want to pick up a problem that directly affects students and want to show that science gives answers to questions drawn from life and offers solutions for them. It is important for them to communicate how research works and they expect ne young people for their own work.

For further information see: www.wau.boku.ac.at/klassenklima.html





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