



Sparkling Science >

Science linking with School School linking with Science

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OUR ENVIRONMENT HAS A HISTORY Students in search for the roots of our environmental problems

LEADING INSTITUTION

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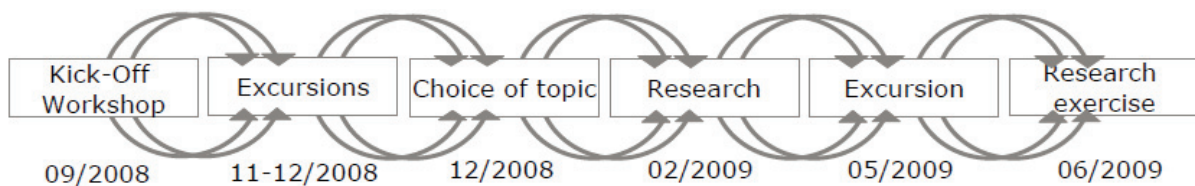
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Austrian Federal Ministry of
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Out of the school and into the archive

Environmental history at the technical school HTL Wien 10 in 2008/09

„Our environment has a history“ supports students of a technical secondary school in independent scholarly research on Austrian environmental history. This is how the goal of the project is defined. In the study year 2008/09, the project team made a big step in this direction. The cooperation with the students followed the original plan with minor modifications:



After the Kick-Off workshop both classes of the technical school HTL Wien 10 which had been invited (3 AHMIM and 5 AHMIM) decided to take part in the project. They were acquainted with issues and methods of environmental history in several excursions. With this input, they were ready to identify their own research questions in a second workshop. The topics they chose were “Steam engine – energy in the process of industrialisation” and “Snowguns – tourism and the environment”. The students of the class 5 AHMIM combined their research project with their skiing week and used their stay at St. Ulrich am Pillersee for interviews and on-site inspections. During the “project workshop week”, both classes conducted independent research on the topics of their choice. They were supported by the scientific team with a project library and in daily workshops. The teachers facilitated their group work, and a science education team documented the process by participant observation. At the end of the week, both classes presented their results to the school principal and department heads and to the public. For the class 5 AHMIM who graduated shortly after, this was the formal end of the project. The other class decided to continue their cooperation with the project throughout the following year. An excursion and a research exercise during the spring term 2009 helped deepening their understanding of the environmental history of industrialisation and prepared them for the choice of a research topic in the coming year.

After the project week, the scientific team and teachers took up work on teaching material which can be used in other schools and other classes to introduce the topic of environmental history. During the entire school year, a science education team conducted interviews with the different groups participating in the project (students, environmental historians and teachers). The resulting evaluation is used to plan the next study year.

“We have gained a valuable experience. The students were committed and motivated research partners. For us, the project is a big success.”

Verena Winiwarter, Project Coordinator



What's new?

Preliminary products from the different work processes

Research at school – results from the “project week”

Two classes of the technical secondary school HTL Wien 10 conducted research in environmental history during their project workshop week (Feb. 16 – 22, 2009). The class 3 AHMIM not only studied the environmental, social and economic effects of the introduction of the steam engine in Vienna, they also implemented their research topic technically: They constructed a steam engine. The class 5 AHMIM developed new insights on the question of environmental impacts of snowguns in the past 20 years. A valuable learning experience for them: The perceived environmental impacts of snowguns differ depending on the reporting person. The class 3 AHMIM obviously enjoyed scholarly work: They want to continue the cooperation throughout the next study year. A statement about the project by a student hints at the reasons, “*Very interesting – would be nice to have such a school subject one time.*”

Scientific results – feasibility analysis for an Austrian environmental history

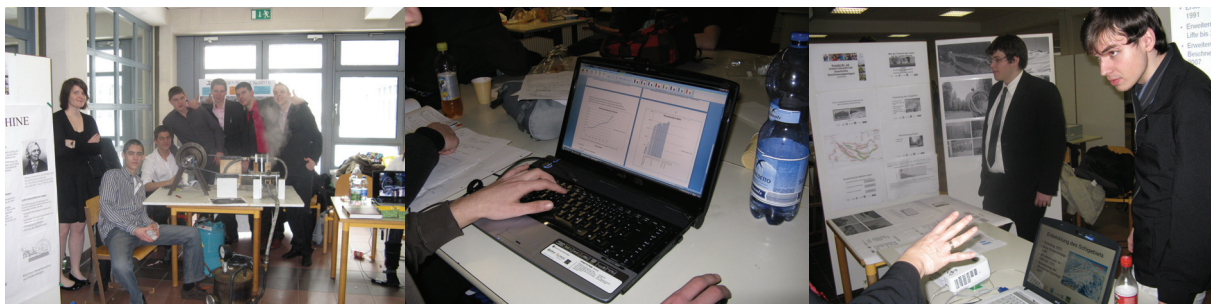
The scholarly results of the students have been published on the project website <http://umweltgeschichte.uni-klu.ac.at/sparklingscience.htm>. For the two topics “Steam engine – energy in the process of industrialisation” and “Snowguns – tourism and the environment”, the scientific team conducted extensive literature research. The results are available as extensive bibliographies and will facilitate further research. The environmental history of snowguns in Austria will be announced as a Master’s thesis. The topic “Steam engines – energy in the process of industrialisation” might be the topic of further research by the class 3 AHMIM.


Didactic results – implementation of environmental history in schools

The research of the two classes and the insights gained from the cooperation between researchers, students, and teachers were used to design teaching materials. The topic “Wood – Coal – Crude Oil. An environmental history of energy” will be implemented in interdisciplinary materials for the school subjects History, German, Engineering and Chemistry and published this autumn by the schoolbook publisher Verlag E. Dornier GmbH. Thus, environmental history will be freely available for other school classes. Gudrun Steinkellner, Verlag E. Dornier GmbH, “*The publishing house enlarges its selection of free online downloads with this contribution.*”

Evaluation through interviews and participant observation

The cooperation between school and science is subject of a formative evaluation by a science education team, conducting interviews and participant observation. Franz Radits, AECC Bio, sums up the work of his team, “*Our core interest is the scientific cooperation between environmental historians and students.*” The cooperation partners are provided with the insights generated as control knowledge. At the end of the first school year, the results are discussed in a reflection workshop and used to plan the next year.





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