

Sparkling Science >
Science linking with School
School linking with Science

PROJECT OUTLOOK, 1st January 2008

Climate change

The impact on bird behaviour and reproduction

LEADING INSTITUTION

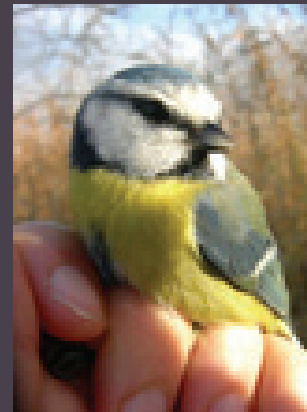
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SCIENTIFIC CO-OPERATION PARTNERS

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SCHOOLS INVOLVED

PG/PRG Sacré Coeur Pressbaum



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Austrian Federal Ministry of
Science and Research

Science goes to school The cooperation with students – hope for the future

Climate change is a fact. There is nothing we can do against. We can only speculate about the importance of these changes and how they might affect us and our environment. The present generation will witness what will happen in the near future but they will be the one which may still have the possibility to influence the outcome. Therefore, it is important to give them the necessary skills and opportunities.

The aim of this project is to demonstrate how to examine the influence of environmental factors on habitat selection, ecology and breeding behavior of a bird, namely the blue tit living in our immediate surroundings (e.g. Wienerwald).

Dr. Herbert Hoi, vice director of the Konrad Lorenz Institute for Ethology of the Austrian Academy of Sciences further specifies, "One of the main goals, besides the scientific outcome is, to sensitize the "young researchers" to this topic and to make them competent ambassadors for the future of our world."

"In fact, Austria is one of the few countries in the world without a bird ringing station and no major research station is dedicated to birds": explains Prof. Hans Winkler, ornithologist and behavioral scientist of the Konrad Lorenz Institute and he further points out that it would be essential to have an organization collecting basic long term data on birds.

Mag. Richard Zöttl, Head of the Gymnasium Sacré Coeur Pressbaum, suggests his school to serve such a function. "We are in the middle of the Wienerwald-Biosphere reserve park and our teams of teachers as well as our pupils are highly motivated to take over such a job."

This project has three main objectives explains Dr. Herbert Hoi:

- 1) The establishment of a long-term research site for data collection on bird's ecology. The school offers itself as a long-term partner for the collection of scientific data. One reason is that the Sacré Coeur School is located in the middle of a big oak wood interspersed with meadows.
- 2) Encouraging young people as scientists: The following parameters are collected by 246 pupils: Climatic data, data regarding vegetation, phenological development, and provision of food.
- 3) The creation of high-quality scientific work, which results will be published in important international journals.



Let's experience Science in the field - not just theory!

Can we stop climate change? What will happen in our environment? Questions students of the Sacré Coeur Pressbaum address in their study

The climate changes! Is this really true? Will we benefit of climate change or will we pay high costs? Will the sea- levels rise? What will change in our immediate environment? These are some questions from students of the 1b form of the Gymnasium Sacré Coeur Pressbaum. They realize that their future is uncertain.

In contrast to this rather sad topic the scientific work itself is very interesting for the students. In fact, scientific work seems to be great fun. "Not only scientists and teachers enjoy the study" says Prof. Mahr, Biology teacher of the school: "It is easy to realize, since many of the students declared that the most interesting thing in the summer term 2008 was the bird-project, which was a preliminary test to assess the feasibility of the project.


"Hopefully, it will be spring soon, because than we can go out and observe the blue tits again" says Stoffi H. "Yes, but we have to put up about 80 nest boxes before that" mentions Oliver H. both students from the 2b form. Antonia M. attending the "biological course" says: "I love most to measure the bird babies – they are so sweet!" Nicki D. (1b) asks: "May I have one nest box to put up in my private garden?"

The students have to do a variety of jobs! They have to measure several climate parameters with our own climate station, sponsored by the "Zentralanstalt für Meteorologie und Geodynamik". They have to build nest boxes for blue tits, which have a special design. Together with Prof Lang (geography) a group of students is responsible for mapping the nest boxes in the study area. Many students are needed to observe the behavior of the birds (e.g. male singing and territorial behavior, and parental feeding). During the breeding season they have to determine arrival, nest box occupation, clutch size and chick development. Several students will be responsible for vegetation phenology and others to determine insect (food of blue tits) abundance and phenology.

Prof. Irene Dobiasch (Applied Mathematics) and her students will collect, analyze and present data.

Prof. Rudolf Freiman (Biology) is happy: "It is great to get extra training in identifying birds via song features and insights into modern scientific methods."





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