

HOBOS wins an award as an official project of the UN World Decade “Education for Sustainable Development”

The old style of frontal teaching is slowly fading away - instead of passive listening, the concept of active learning and research should be the main approach of schools in the future.



The Memmert GmbH + Co. KG is an official partner of the **HOBOS** project

The reality is that if politicians and educational institutions do not reconsider their ideas and approaches, then it will be extremely difficult to capture the natural curiosity of the children who want to learn. **Jürgen Tautz**, a bee expert who is known throughout the world, is not the only person to hold this opinion. However, things are moving much too slowly for the biology professor. Consequently, he has now set up his own learning and teaching model with the HOBOS project, which Memmert is involved in as both an official partner and supporter. Christiane Riefler-Karpa is the Managing Director of Memmert GmbH and herself the mother of three children. This means that she too has a considerable personal interest in the pursuit of alternative forms of teaching. As she puts it - “The sense of community is being lost in schools. Children need more options to develop in shared projects, in turn enabling them to come together more closely as a group. The approach presented by **HOBOS** has considerable potential and I wholeheartedly support it.”

If they so desired, the students and employees of the **BEEgroup** at the Julius-Maximilian-University of Würzburg could just leave their work behind and instead spend their time giving interviews and collecting honours. The **Honey Bee Online Studies**, which is the full name of the **HOBOS** project, has recently been appointed a UNESCO partner, making it an official project of the UN World Decade 2005-2014, “**Education for Sustainable Development**”. Furthermore, such television stations as the BBC and ZDF, as well as such renowned magazines as Stern, Spiegel, and indeed the New York Times newspaper have reported in detail on the work of **Jürgen Tautz** and his team. And the positive news is that Professor Tautz and his team are determined to carry on their hard work. This is because what

Gentle breeding of insects without vibrations

As the **honey bee** is in danger, the **BEEgroup** in Würzburg are breeding the young bees in the IPP **cooled incubator** to conduct basic research, as well as research relating to the health of the bees. The appliance both heats and cools using the sustainable and economic **Peltier technology**...

drives them more than anything is the possibility they envision of being able to create equal opportunity in education, globalise teaching content and deliver knowledge to children in completely new and unique ways.

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The honey bee is the star of the innovative education project

The **honey bee** in this instance takes on the role of a Trojan horse and is best suited to this role. Throughout the world, different cultures are familiar with this small, multi-faceted insect, which is generally speaking universally appreciated. It is a topic in every syllabus and attracts an unusually high degree of interest. And the technical outlay made for this ambitious **education project** is similarly high. Using webcams, classes of schoolchildren or students can observe the **honey bees** in the beehive and also see how the offspring are born in the [Memmert constant climate chamber](#). They are also able to experience a vast array of material that can be used to deliver stimulating, informative and **innovative** lessons. Children are able to experience at close hand the longevity of “their” **honey bee** thanks to the fact that a tiny RFID chip is attached to each **HOBOS** bee, making it possible to document their whereabouts, their exploratory flights and ultimately the point that they cease to exist – specifically when they fail to return to their hive. Information regarding the weather, sounds in the bee colony, air quality, temperatures, air humidity or CO₂ content is collected by sensors, in turn providing the children with a constant stream of material for their own observations. At what temperatures do the bees fly out of the nest? How loud is a bee colony at night? What do **honey bees** do during the winter? All of these questions can be answered thanks to stored data covering several years and Hartmut Vierle, Chief Technician of the **BEEgroup**, has for some considerable amount of time been counting in terabytes as regards the organisation of the necessary storage space.

A beehive is also an AtmoSAFE

Interesting insights into bionics for **laboratory equipment**. Professor **Jürgen Tautz** talks about beeonics in the oven in an exclusive interview with AtmoSAFE...

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Innovative approaches to education for sustainable development

Of great significance is the opportunity to involve different

Laboratory equipment for breeding insects

subjects in this **education project**. Applied mathematics is covered through graphs and diagrams showing correlations and progressions, while English lessons can take advantage of the bilingual pages of the **HOBOS** website. The importance of the **honey bee** in terms of ecology and agriculture can be examined, which covers geography, and economic science lessons can focus on its economic significance as the third most important domestic animal in central Europe. Quite literally the possibilities are endless - even art projects can be inspired from this subject matter if teachers and students alike allow their creativity to flow. The first pilot projects will commence from this autumn in selected schools across the world. From there, approximately one year on, the aim will be to launch **HOBOS** on a wider scale.

You can find further information regarding the **BEEgroup** and the **HOBOS** project at www.beegroup.de and www.hobos-online.de.

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