

BAYER FOUNDATIONS SUPPORT MOBILE STUDENT LABORATORY

Using experiments to boost language skills

Since December 2016, trainee teachers from Halle have been visiting classes of refugees in Saxony-Anhalt for lessons in a converted caravan. A specially developed project week on the human body is helping refugee children explore scientific methods while also improving their language skills.

The children gathered around Tobias Schmidt are clearly fascinated. The doctoral student from Martin Luther University in Halle-Wittenberg shines a UV flashlight onto a table top he has covered with a special spray. He has explained to the students that the UV light makes it possible to see bacteria. Soon a mysterious, green-lit handprint appears – evidently a hotspot for microbes! The first day of the "Human body" project week at the Sekundarschule Kastanienallee school in Halle is all about hygiene, giving the students the chance to explore where bacteria can be found, where they can be useful, and where they cause problems.

What makes this project so special is that it is designed for classes of refugees who cannot speak much German yet. The lessons take place in a converted caravan, with which the trainee biology teachers from Halle visit schools in the surrounding area to share experiments and learning materials on topics such as healthy nutrition, drugs and sexuality. "This is a very open concept based on workshops and experiments, allowing the students to work together in a very different way from how they do in their usual lessons – both with each other and with the teachers," explains Professor Martin Lindner, the initiator of the Science4Life mobile lab project. The Bayer Science & Education Foundation will contribute EUR 117,000 to the project over the next three years.

The mobile science laboratory is highly popular with schools as a means of bringing science to life for children in welcome classes for refugees. The project week combines specialist topics with language teaching. For four days, the students are busy with experiments and research. They document each of the project days themselves using an iPad – for instance, by taking photos. On the fifth day, they put together everything they have learned and discovered in an e-book. Presenting the results is a great way to put their language skills into practice. Each project week is led by two to three trainee teachers and counts towards



Getting to know your body: trainee teachers use the Science4Life mobile lab developed by Professor Martin Lindner (photo below) to demonstrate scientific experiments in schools in and around Halle.

their study program. Usually, there is also an interpreter on hand to support the teachers.

So far, the team has delivered five project weeks at different schools since December 2016, and all of them have been a huge success. As Lindner explains, the concept can easily be adapted for any age group – from younger children right through to students at vocational schools. Depending on their previous understanding and language ability, the students can also help each other to learn specialist terms and share their knowledge. "Nobody ever gets bored!" Lindner says with confidence. His aim is to teach the students to see the world as scientists do, finding explanations for everyday phenomena and researching causes. Given how successful the project weeks have been, Lindner is now preparing applications for a second mobile science lab, this time to focus on the topic of energy. ■



Open concept: Martin Lindner is Professor for Biology Didactics at Martin Luther University in Halle-Wittenberg and the initiator of the mobile student lab.