



JACOBS  
UNIVERSITY

PRESS RELEASE February 3, 2022

### [Passion for STEM: University Students Design and Teach STEM Workshop for High School Pupils](#)

**For the fifth year in a row, high school students in the region of Northern Germany had the chance to become immersed in an international university environment at Jacobs University for the annual MINTernational Workshops. The week of lectures, workshops and laboratory visits took place from January 24 - 28<sup>th</sup> and focused on topics within the areas of Physics and Chemistry.**

Students from our school/Teilnehmerinnen unserer Schule:

Franziska W.

Hannah P.

Katharina S.

For many students, it was a first impression in the world of university academics. Many hadn't previously stepped foot on a university campus – much less in a complex and advanced laboratory with sensitive equipment. **For Hannah and Katharina from Osterholz-Scharmbeck**, the time in the Chemistry laboratory was the most interesting component of the STEM week: "My favorite day was Wednesday," said Hannah, "the laboratory tour was very cool." The two also took the opportunity to explore the Jacobs University campus and interact with university students during their free time.

The lectures and workshops were structured by Jacobs University faculty members Professor Jürgen Fritz (Physics) and Professor Ulrich Körtz (Chemistry), but mainly designed by their students. Jacobs University students Tristan and Carmelo prepared lectures for the high school pupils in the area of Solar Energy, starting with Solar Astrophysics and moved into topics closer to Earth: black body radiation, analysis of the atmosphere and solar cells. Most of the high school pupils, like Elias from Buchholz, are already looking forward to starting their careers in advanced Physics and joined to gain additional knowledge: "The first three days we dealt with things that I was somewhat familiar with, but of course I had never calculated anything like the energy of the sun, the last days were more challenging for sure," said Elias.

Finding the right balance between difficulty and interest was of course a hurdle for the student lecturers, which accommodated the material for 11, 12, and 13-year German high school pupils. "I chose the topics I am most passionate about and tried to make them as understandable as possible for the high school level," said Jacobs University student Sofiya, who was giving Chemistry lectures. The

chemistry group found that though learning about complex topics in English required a certain level of adjustment, the topics were familiar and still challenging and interesting.

The MINTernational Workshops have a twofold effect: they are a great opportunity for high school students to get a taste of university level STEM research, yet they are beneficial for university students to obtain some experience with teaching. While some student lecturers, like Sofiya and Tristan, have other future plans in the fields of Chemistry and Physics, Carmelo used the workshops as an additional opportunity to teach: “I already knew I enjoyed teaching and this was just one more opportunity to gain more experience in the field.”

These week-long workshops- which are free of charge- combine theoretical and practical elements. For their participation, the students receive a certificate that is accepted for the MINT-EC certificate – an award for outstanding performance and commitment in the subjects of mathematics, IT, natural sciences and technology (MINT – the German equivalent to STEM).

**Source:** [Jacobs University Website](#)

(Dr. Freia Hardt)