



Our Alumni give back to current DSP learners

During February and March 2019 a 3D-printing workshop for DSP learners took place over several weeks. The workshop was arranged by DSP Alumna Inga Beyers in cooperation with Mr Markley.

More about Inga Beyers...

“After a gap year in Canada I started my B.Sc Environmental Engineering degree at the Technische Universität Braunschweig. During the course of my studies I changed to B.Sc Mechanical Engineering, focussing on Energy- and Process Engineering. I am currently in the final stages of my Master’s Degree at the Leibniz Universität Hannover, where I intend to do my Ph.D. Although I study Energy Engineering, my mechanical engineering foundation enabled me to become well versed in 3D-Design, which happens to be a hobby of mine,” explains Inga.

The DSP has remained important to Inga, not only because her mother works at the school but also because her two brothers attended the DSP long after Inga. With the 3D-Printing Workshop Inga wanted to give something back to the DSP in a technical field, which she is passionate about.

“I was delighted that the concept was well received and embraced by the school. This enabled me, in collaboration with Mr Markley, to design a fun workshop for the learners, which empowers them to get to know this exciting, future orientated technology,” says Inga.

More about the 3D Project...

The 3D Project was aimed at two different groups which Mr Markley currently teaches: the DSP Robotics team and the Grade 5 and 6 Robotics “Neigungsfach” learners. During the 5 weeks they learnt how to operate a 3D printer, which developments are currently taking place within 3D printing, how



Inga Beyers



Inga Beyers as DSP learner

one constructs a component with a 3D drawing program and how one exports it to be print ready.

3D printing has established itself as a key development in the manufacturing of time and cost efficient prototypes.



It combines construction, technology and digitising which makes it perfect to inspire learners about technology and give them insight into the possibilities of modern production methods. Their spatial and digital competence is stimulated through drawing and slicing software.

3D print means that the substance is applied layer after layer to produce a three dimensional component. It all starts with a computer and a virtual design of a component. The basic mechanics of the 3D CAD (Computer-Aided Design) programme "Fusion 360" was explained

as well as the most important principles of construction. Eventually the learners designed their own object and created a 3D model.

Through a slicing programme the completed 3D model was translated into commands for the printer. Here the learners got to know the parameters of a 3D print such as pressure, speed, temperature and fill.



The primary goal was to raise an affinity and enthusiasm for technology. For the Robotics extra-mural activity the technology offers the advantage that spare parts can be produced in a quick and easy fashion. Because one is not limited to existing parts it opens the door to new creative possibilities.

The learners designed and printed a series of innovative objects such as cell phone holders, key rings, and models of houses. The Robotics extra-mural group printed their first spare parts. At the end learners were in a position to independently complete the process from conceptualisation to the final product. In their studies and career this ability will present itself as a major advantage.



"I appreciate the inter-disciplinary approach which I learnt at the DSP. It pushed me to look beyond the obvious. The solid natural science education stood me in good stead in the first semester of my Engineering Degree. Especially in the fields of natural sciences and technology, DSP Alumni have learnt a great deal and in return are in a position to give back to the school to complete the circle," concludes Inga.



