

Getting to work with robots!

Author: Peerke Otte, teacher, Aeres VMBO prevocational secondary school, Almere

The Aeres VMBO Almere always tailors its teaching to current developments. As from this school year, pupils not only follow their vegetation, flowers and animals practical subjects, but also take interesting lessons in Robotics. First and second-year pupils learn about this increasingly important technological development in a unique, modern manner. In adopting this approach, the Aeres VMBO Almere become the school of the future.

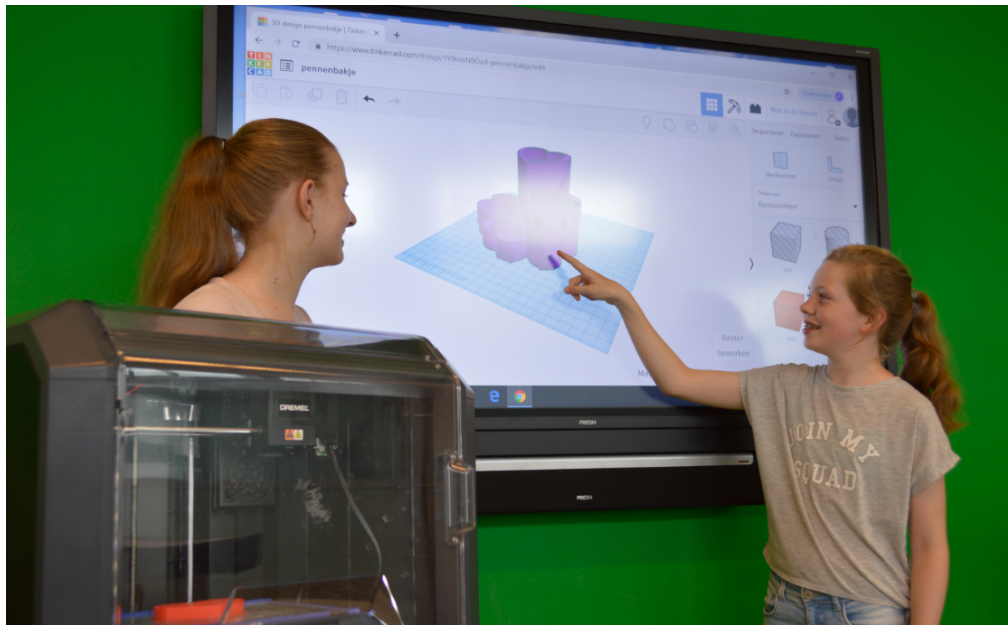


On the road to ...

Technological developments keep schools on their toes. The Aeres VMBO Almere needs to keep pace with developments to prepare its pupils thoroughly for the future. As from this school year, the practical general biology subjects the pupils follow are supplemented with an introduction to this important and rapidly growing technology. I have now been teaching science and technology subjects at Aeres VMBO for more than ten years. Last year, I was offered a unique opportunity to set up a robotics lab to supplement the science and technology lessons.

During the past year I and my departmental colleagues at Aeres VMBO Almere visited various trade fairs and met with various robotics specialists. This was of great value to me in organizing the new practical lessons. I learnt a great deal, and I know more about the equipment available for the lessons.

3Dkanjers played an important role at the beginning of and during the school year, when they shared information with us and gave valuable advice.



The lessons

First and second year pupils become acquainted with robotics during the lessons, and they learn about the use of these 'toys' in everyday life. The pupils are issued a separate program and their own Ozobot that makes them feel responsible for their 'pet'. 'We tell the pupils that the robot is like a Tamagotchi, they have to take good care of it.'

In addition to becoming more familiar with robotics, the pupils also learn how to use Dremel 3D printers. I have studied this development in increasing depth during the past years, when I also designed a demo house and printed a scale model. This awakened my enthusiasm for 3D printing, which I have been able to transfer to my pupils. 'I am convinced that an infinite range of applications for these printers will open up over the coming years, such as printing whole homes, and prosthetic limbs for patients. Restaurants are also using this technology to print entire meals and shapes. I welcome this opportunity to prepare my pupils for these developments.'

Our knowledge

A range of design programs are used during the robotics and 3D printing lessons. The teachers work with these programs to learn how to use them and get to know the various parts. They spend several afternoons practising with the programs to become thoroughly familiar with them, ready to awaken the enthusiasm of their pupils. 'I simply get to work, and I search for information on the Internet until I understand how it works. I'm aware that there's a risk of me getting out of my depth, because I realise that I don't know everything about robotics. I simply explain this to my pupils, and then we work together on tackling the problem and trying to find a solution.'

The future

Our pupils can't wait to be admitted to these lessons. We continue to build up our knowledge and keep up with developments in the technology so that we can offer the pupils appealing lessons that make them completely ready for the future!'