

FIRST® LEGO® League: Robot competition in Würzburg



Debut for the JEG-Robots in the First Lego League in Würzburg. Mark, Benjamin, Alexander and Lukas (from left) explain how their robot works to Michael Stammberger (third from right) and Stefan Pausch from Apprenticeship Brose Group.

Würzburg (15. ledna 2020) You can feel the excitement in the air at the Wolffskeel Secondary School gym in Würzburg. Ten pairs of eyes closely follow the action on a game field the size of a pool table where a robot is moving autonomously. It moves housing units with the help of a crane and positions solar panels and roof terraces. The young inventors clap and cheer each time the robot correctly triggers a mechanism or places an object on its designated spot. But was it enough for the team to win?

16 teams from 13 Lower Franconian schools had at least eight weeks to prepare for the regional competition of the First Lego League. The nine to 16-year-olds built robots that can complete tasks autonomously from more than 500 individual parts comprising sensors, motors and Lego blocks. The teams of two to ten members tinkered on, tested and programmed their robots with support from an adult coach. Then on 10 January, the roughly 140 students got to present the results of their work.

“A competitive atmosphere and lots of enthusiasm for technology and science. That’s what makes the First Lego League regionals so exciting,” explained Michael Stammberger, Manager Apprenticeship Brose Group. The automotive supplier is supporting the robotics competition and research project for the sixth year as a main sponsor and organizer. “At the First Lego League – and also at Brose – it’s all about ingenuity, motivation and teamwork. That’s why we support the competition and use it as an opportunity to attract the attention of young people who are interested in technology. Today’s contestants might be the

technicians, programmers and electronic engineers who help shape the future of mobility,” said Stammberger.

On the day of competition, the robots have two and a half minutes to autonomously complete as many of the 14 challenging missions as possible. “The task with the crane was the most difficult one for us,” explained Lukas from Röntgen High School in Würzburg. “The robot had to press a lever on the crane to stack a housing unit. The robot’s approach must be perfect for this to work. But things didn’t always go as planned,” added the 16-year-old. The Robot Game was one of four parts of the regional competition that were scored. Robot design was also considered in the overall result, and points were given for the research task with the theme “City Shaper – Designing the buildings of the future”. The object for the teams here was to come up with sustainable living and working solutions for the cities of tomorrow. They presented their creative approaches to the panel of judges. The teams also had to solve a previously unknown challenge. “That was my favorite part,” said Louisa (13) from the JEG-Robots of Julius-Echter High School in Elsenfeld. “We had to build a house of cards – and the more stories it had, the more points we got. But they also judged how we worked together as a team.”

The “RS_nightMARE” team from the Marktheidenfeld Secondary School had the highest total score from the four categories. Last year’s winner, X-Rays@M!ND-Center from Röntgen High School in Würzburg, came in second. Both teams will compete at the semi-finals at the Regensburg University of Applied Sciences on 15 February, where they have a chance to qualify for the European-level finals at the University of Applied Sciences Offenburg on 6 and 7 March. The First Lego League is a global education program that aims to get kids and young adults excited about the STEM subjects science, technology, engineering and mathematics and introduce them to issues that affect our society at an early stage. Around 40,000 teams in 98 countries compete in the contest.



How many of the 14 tasks in the Robot Game can the robot autonomously solve? Luca, Benja and Mirja (from left) from Balthasar-Neumann High School in Marktheidenfeld closely follow the action.