

Finland

The Third LLT activity is "**VEX ROBOTICS**". It is planned on 06-10.05.2019 in Finland. The planned activities aim to share VEX robotics experiences and knowledge among partners. Harjunrinteen Koulu Secondary school has national and international awards for VEX Robotics races. Harjunrinteen Koulu Robotic Club had selected for 2018 VEX Robotics World Championship that will be held on 3rd of March 2018, at Kentucky USA. Two separate robotic clubs in the school have achieved many degrees in the national and international field. In addition, Riihimäki municipality, where the school is located, also supports all schools environmentally and spiritually. In the school, there are many VEX Robotic equipment that is enough for every participant. The activity will be carried out at Robotic Lab, on 06- 10 May 2019 in Finland, Riihimäki. The host organization is "Harjunrinteen Koulu secondary school". This activity will last 7 days; 5 days for activity and 2 days for transportation. There will be 2 teachers and 4 students from each country. During the 5 days, students will focus on VEX Robotics. Providing the tools to inspire students to solve problems of future. "VEX ROBOTICS" LTT activities:

1st Day: Ice-breakers and meetings. VEX Robotics will focus on to create engaging, affordable, and powerful solutions that immerse students in STEM through the excitement of building and programming robots. Introduction to robotics and learning STEAM subjects through robotics.

2nd Day: Students will learn about the basic principles of mechanical design, including structure, motors, gears, and more. They will use robotics to teach fundamental engineering concepts, design, building, testing, development, and basics of coding. Students collaborate and develop robots to solve real problems like the need for quick transportation. Students will use the Robot programming environment to program the robot for self-driving tasks and radio controlled operation

3rd Day: Robotics event: Exploration trip to a robotic event. Getting acquainted with a variety of robotics competitions for elementary and middle school students and robotic learning environments.

4th Day: A visit to a robotics company or to a company using Robotic process automation or industrial robotics. When teachers and students turned to hometowns they will share this experiences with their families, friends, and colleagues

5th Day: Evaluation forms and questionnaires will be filled by participants and results will be shared with other partners. The activity will be completed with the cooperative evaluations. In the activities of short-term exchanges of groups of pupils, Students will learn Educational Tools for Classroom (VEX IQ) and VEX IQ Curriculum. Teachers will practice integrating VEX Robotics with their curriculum. The VEX IQ Workshop combines robot building and robot coding. Students will be able to build STEAM related robots at their own schools. After this LTT, students will be able to compare different Robotics How is participation in this activity going to benefit the involved participants? "VEX Robotics" LTT activities will benefit to develop the VEX IQ Curriculum.

In Finland Activities participants;

- -will have an intimate look at the natural world and successful education system of Finland.
- -will easily implement high-quality STEM Robotics into classrooms
- -will provide students having problem-solving with 21st Century skills.
- -will learn about VEX that is A STEAM Education Revolution
- -will be encouraged about important life skills like teamwork, communication, and project-based organization for students with the social obstacle -will provide students to improve their foreign language skills.
- -will be aware of being EU citizen, In team building activities
- -will develop their cooperation and communication skills, will learn respect for others from different cultures. -will develop an algorithmic and computational thinking behavior to solving everyday problems.
- -will have the chance to compare LEGO EV3 Mindstorm and VEX Robotics principles In this activity process, students will identify the STEM problems, explain it and define the stages of problem-solving and express their own ideas, thus they will both support their friends and get support from them.

Therefore the learning through this activity will be very beneficial. Thanks to cooperation and communication in this activity students will have different points of STEM and STEAM subjects through robotics.