

Mission 4 – Initiate Launch

Welcome to the launch site. Everything is finally ready. The crew members are all here and the pre-flight checks have been conducted. What you need to do is have the launch pad robot press the launch button outside to send this craft streaking into orbit. And that's where you come in. You will be the one responsible for sending the rocket on its way and initiating the launch. Program your robot to press the launch button and start the launch sequence to bring the first crew to explore Mars. We are so proud of all your accomplishments. Save travels!



STORIES OF TOMORROW Space Challenge Missions

Workshop

About the training organization - WROHellas



WROHellas is an organization dedicated to introducing Educational Robotics and to offering the STEM educational method to the children of Greece. With the volunteering assistance of well-known scientists and academics, WROHellas offers the expertise on modern technologies and problem solving techniques to every corner of the country.

Stories of Tomorrow

Students Visions on the Future of Space Exploration



Storytelling is a great way to support the development of students' inquiry skills and help them gain initial scientific experience while at the same time enable to them to use the potential of the imagination and creativity. The STORIES project is using the concept of storytelling a catalyst for the effective interaction between Arts and STEM disciplines which share in many ways similar values, similar themes and similar characteristics.

The project will design and test a new vision for teaching and help develop strategies for how teachers' roles and conditions can support and enable deeper learning for students. To do that, the project will include and use innovative and meaningful digital technologies, such as advanced interfaces, learning analytics, visualization dashboards and Augmented/Virtual reality applications and build a storytelling platform where students will develop and publish stories about a Mars Mission.

<http://www.storiesoftomorrow.eu/>



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Organized by



ELLINOGERMANIKI AGOGI



EV3 Space Challenge Missions is an innovative way of teaching modern STEM concepts. Students take responsibility for their own learning and become young scientists and engineers, immersed in motivating challenges that encourage creative problem-solving, communication and teamwork.

Designed as an engaging and easy introduction to robotics, students (in our case summer school participants) will work with a very current and real-world theme – travelling to and living on Mars. They work as scientists and engineers and progress through missions that enable them to apply and creatively adapt programming and problem-solving skills to construct robots that solve actual space exploration challenges. Developed together with actual space exploration engineers, these challenges match key problems that space researchers around the globe are striving to solve:

- How to ensure humans can survive in space
- How humans can create energy in space
- How robots can help humans explore space.

So a student's first steps with science and robotics could eventually lead to the next leap forward in space exploration.

Mission 1 – Activate Communications

The scientists want to upload a whole load of raw data to the space base in order to get it up and running. Right now, we can't seem to do the upload!

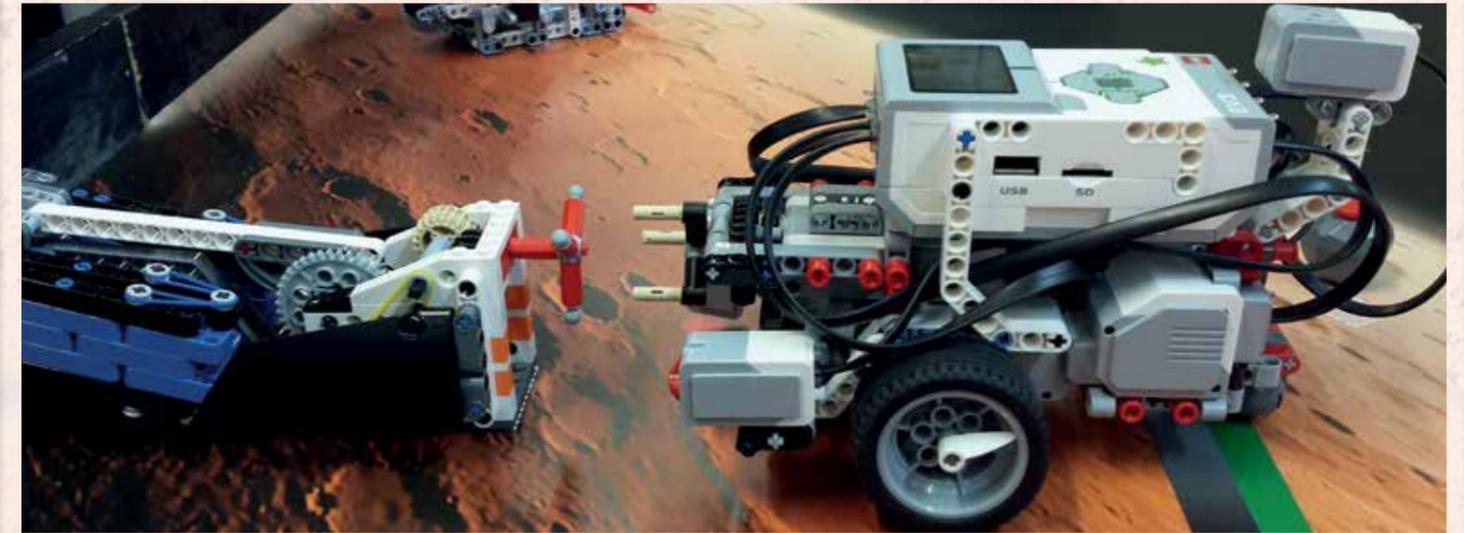
What we need is a robotics expert who can get the communications station online quickly and effectively. We have been told that you and your team are the people we need to speak to. Do everything you can with your robot to get the station online. . They are depending on you to make that happen. Please hurry!



Mission 2 – Free the MSL Robot

The MSL robot is used to roam Mars' surface on many different missions. While it was climbing one of the steeper slopes on the Martian terrain, the MSL robot got stuck. Although there is enough power to turn the wheels, the faster they turn, the more they dig into the surface. If the MSL robot can't free itself . . . then it's up to you!

Program your robot to free the MSL robot from the slope so it can continue on its mission to study the Martian surface. This is an expensive robot, so we need your help urgently!



Mission 3 – Launch the Satellite into Orbit

This satellite is a key part of the mission and will be responsible for making sure that the space base can communicate with Earth. If the satellite doesn't launch and there are problems with the space base, you could end up with a serious problem.

For this reason, you need to place a broadband communication satellite into low Earth orbit. The satellite has to go into the marked area to make sure that it can communicate quickly and clearly and send a secure unlimited real-time flow of data to and from Earth.

Make sure that you program the robot so that it places the satellite in the marked area. We are depending on you!

