I LOCAL HACKATHON IES ZURBARAN (BADAJOZ, SPAIN) JUNE 2023 EXECUTIVE SUMMARY

Women SPACE

ASSOFORM ROMAGNA

Osnovna škola
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Co-funded by the European Union

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PROPOSALS

The following projects were proposed in the I Local Hackathon by different group of students. As can be seen, there were common themes proposed. We can distinguish two main questions: **environment** and **agricultural solutions.**

1. Reforestation. Small seeds cultivation by controlling environmental conditions.
2. Environmental temperature and humidity measurement to improve plants health.
3. Remote classroom temperature control.
4. Agricultural tool for irrigation automation.
5. Automated tool to detect different types of plastic. The objective is recycling in the correct bin.
6. Humidity detector to activate irrigation system.
7. Fire prevention (farm and forest use).

OBJECTIVES

From previous proposals we have extracted the specific goals that students want to reach with each implementation. These goals are related to technical knowledge obtained through STEAM studies during the academic year.

1. Technological knowledge improvement and environmental sensibility.
2. Reforestation aid.
3. Temperature classroom control and reduction energy consumption.
4. Optimization of water consumption in agricultural activity.
5. Recycling activity.
6. Maintenance of natural spaces.
7. Forest fire control.

TECHNICAL EQUIPMENT AND TASKS PROPOSED

As you can see in the following table, technical equipment and its uses are detailed. These are the equipment needed to implement proposals presented by students in the I Local Hackathon.

TECHNICAL EQUIPMENT	USE
3D printer	Robot design
CO2 detector	Environmental pollution control
Humidity detector	Humidity control
Water tank	Water storage
Solar panel	Energy source
Battery	Energy

Thermometer	Measurement
Wi-Fi connection	Net connection
Arduino board	OTTO implementation
OTTO components	OTTO implementation
Thermal sensor	Measurement
Bluetooth and GPS	Nets connection

GENDER EQUALITY CHALLENGES

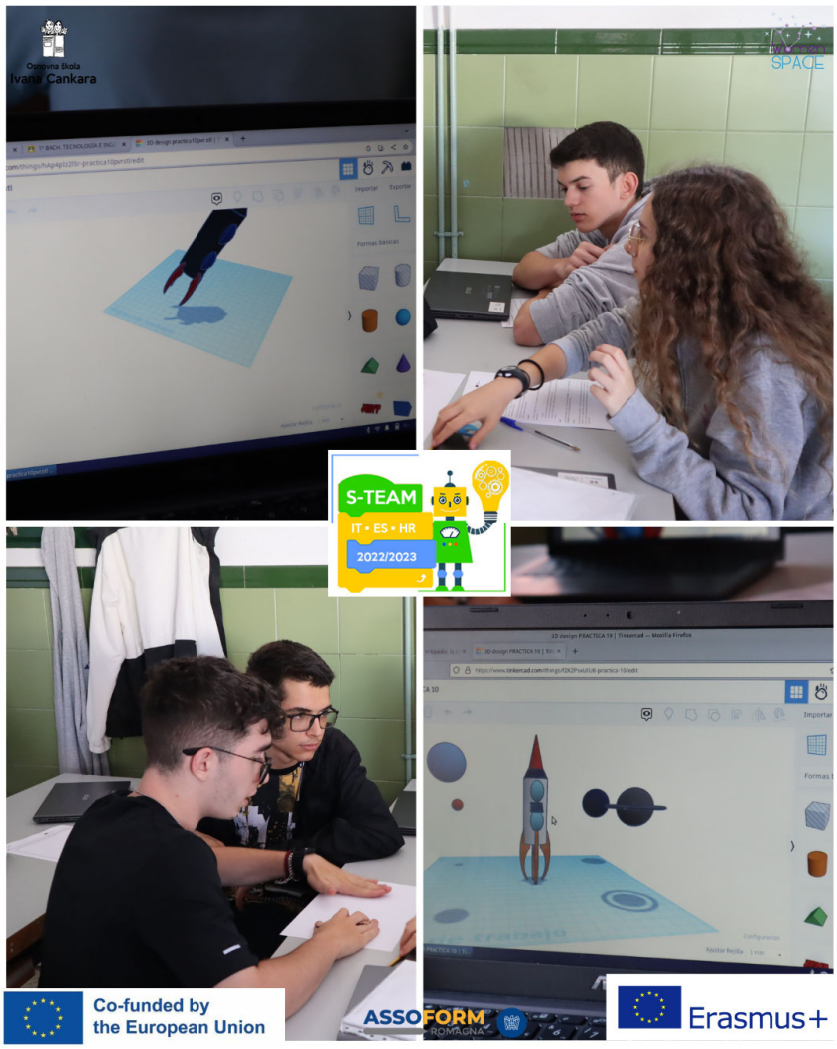
One of the goals of S-TEAM UP project is to reach real gender equality in classroom, so I Local Hackathon had and important gender teaching. We asked students to include in the development of the Hackathon these following questions:

1. Cooperation and joint work between girls and boys.
2. Women development in technological and scientific areas of knowledge.
3. Promote scientific and technical capabilities development between girls and boys.
4. Promote scientific and technical studies between women.
5. Equality promotion between girls and boys.

LOCAL HACKATHON DEVELOPMENT

Finally we give organizational information about I Local Hackathon development.

- ✓ In the I Local hackathon took part seven groups during one journey.
- ✓ Women Space Extremadura (WSE) explained the goals and rules to hackathon develop and teachers involved in the project solved technical questions students had.
- ✓ Age range participation was from 13 years to 15 years.
- ✓ OTTO robot was the common element to develop different proposals presented.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