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Techno Farm

Robot ZONE [01]

Presentation Challenge 6-10 yo

2027

Context

One year after the flood that forced the Tirulis to leave their village, the new village perched atop the hill is complete. But there's a problem: the mountain soil is rocky and sloped, and the Tirulis are having trouble growing enough food to feed the entire village. Sowing, tending, watering, and harvesting wheat, fruits, and vegetables by hand takes an enormous amount of time, and supplies are beginning to run low.

The village council is therefore calling on all the young people of Merodian: they need to design robotic machines to help the Tirulis farm the land more easily—an Agribot!

Challenge

In this challenge, your team will design a robotic model of a field, garden or farm in Merodian. This will include a new machine, an Agribot, capable of helping the Tirulis plant, grow, water, sort, harvest or care for the farm more easily. You will also need to give it a name!

You will need to create this agricultural environment, including what grows there, its tools, farmers, animals, machines, etc. You will have a few minutes to present it to us!

Of course, you will also need to bring your field, garden or farm to life through robotics by creating movements related to agricultural work.

Presentation Area

Each team will have a space measuring 100 cm by 60 cm. On this space (table), you must place your model, robot, and posters to present your farm and explain how it works.

Step 1: Explore

- Identify everything that can be found in a field, garden or farm in Merodian. What grows there, tools, farmers, animals, irrigation points, watering systems, harvesting areas, sorting stations, etc. What is needed to keep this place running? What is a farm? It's not just about animals… do your research!
- Learn about farming methods. What equipment is needed? Will you need to dig, plant, water, cut, transport or perform other tasks?
- Look at the other Zone01 challenges to see what already exists in Merodian (fruits, places, lakes, fields, products, etc.).

Now that you know the project well:

- Create the field, garden or farm of your choice in Merodian.
- Describe its environment, crops, important elements, layout, tools, processes, etc.
- How will you illustrate movement in your project? What will you build as your Agribot?

Step 2: Create

It's now time to build your Agribot and your model! Create a robot that illustrates one or more movements related to agricultural work. Be creative!

You can use any robotic platform for your creation. You can also use different types of materials: LEGO, cardboard, recycled materials, etc. – you can print, draw, build, glue, etc.

Your model is the foundation of your presentation. It can show the environment and the different elements of the field, garden or farm, and everything found there! It tells the story behind farming the land. Note that an Agribot is not necessarily a tractor... It could be a seeder, an irrigation system, a weeder, a harvester, a robotic scarecrow, etc. The goal is to meet the needs of the Tirulis described earlier in this document…

Your team must also prepare a presentation board approximately 122 cm (width) x 91.5 cm (height) showing the design process and details of your project. You can purchase a presentation board or make one yourself.

Step 3: Share

It's now time to share! Be well prepared, because several judges will visit your booth! You must present at least the following information to the judges:

- What is the name of your Agribot?
- Which farming task does it improve (planting, growing, watering, harvesting)?
- Explain the different steps and demonstrate the movements used. Why did you choose this approach? How did you build everything? Describe the mechanisms.
- Describe the environment and what can be found there.
- What inspired you to create this Agribot?
- What are your favourite elements of your field, garden or farm?
- What is moving in your project? How did you program everything?

A few rules to follow

- A team is made up of 2 to 3 students.
- Your creation must fit on a 100 cm by 60 cm table.
- You must proudly display the name of your Agribot.
- It is helpful to write down what you want to say on your presentation board but avoid reading it word for word! You should speak directly to the judges!
- The team has a maximum of 4 minutes to give its presentation and answer questions. There will be lots of people, so practise speaking loudly!

Scoring

Criteria	Points
The robotic model (the Agribot and its environment) is well designed and detailed.	/5
The method/mechanism used to initiate the agricultural movements is original and demonstrates a motor-driven movement. Sensors recommended.	/5
All students participate in the presentation.	/5
Students answered the questions well.	/5
The presentation was lively and dynamic.	/5