Robot ZONE [01]

BUGS ALIVE

Rookie Challenge

6-10 years old

Image by Oktavianus Mulyadi

Context

Since the dinosaurs disappeared from Planet Z, the ecosystem is home to the smallest creatures and insects. For all species to live in harmony, every living being has a role to play!

In this challenge, you and your team will prepare a robotic model of an insect or a small creature living on Planet Z that plays an important role in the ecosystem and nature.

You must create this new living being and its environment, including its habitat, how it moves (legs, wings, fins, or others), its food, its predators, its prey, and above all, the role it plays! You will have a few minutes to present it to us and teach us more!

Of course, you will also need to bring your creature to life using robotics!

Description of the Display Area:

Every team will have an available space of **100 cm by 60 cm.**

On this space, you must place your model, accessories, and posters to present your creature in motion and explain how it survives on Planet Z.

Step 1: Exploring

- Identify insects, critters, and small animals that exist on our planet, Earth. In what environment do they live? What do they eat? What are their roles in the ecosystem?
- Conduct research on ecosystems to understand what ensures balance.
- Consult the other Zone01 challenges to see what is on Planet Z (Treasure Hunt, Micro-Sumo, and Pollinator challenges).
- What is nature made of on Planet Z? Describe the environment, water, land, and plants.

Now that you have familiarized yourself with the concepts:

- Invent your own critter that lives on Planet Z.
- Describe its environment, habitat, diet, how it moves, and its physical characteristics.
- How will you illustrate movement in your project? Does your critter have legs, wings, fins, or other limbs?

Step 2: Creating

It is now time to build your robot and your model! Create a robot that illustrates the movement (moving, feeding, working) of your creature. Be original!

For your creation, you can use any robotic platform. You can also use various types of materials: LEGO pieces, cardboard, recycled materials, etc. Be creative; you can print, draw, make, glue, etc.

Your model is the basis of your presentation. It can show the environment in which your creature lives as well as its predators/prey, or even its habitat and its contribution to the planet's ecosystem. It's the little story of your creature!

Your team will need to display its design steps and details on a board with approximate dimensions of 122 cm (length) x 91.5 cm (height). You can buy a presentation board or make one.

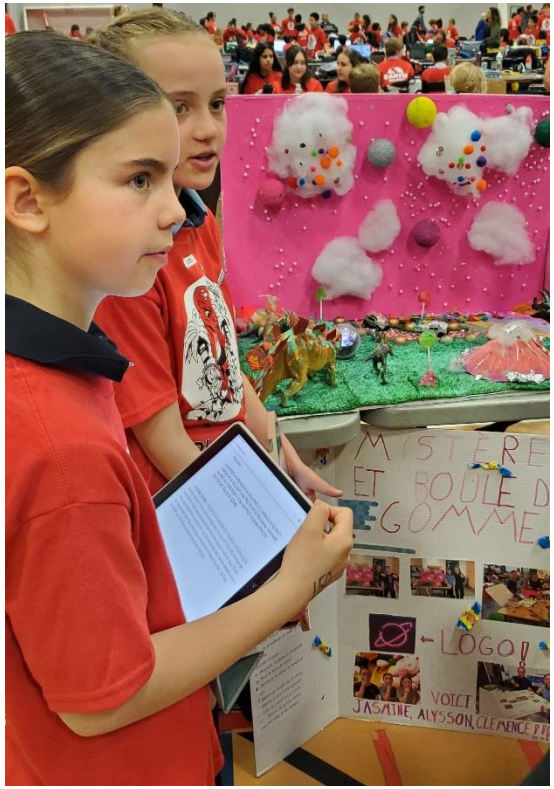
Step 3: Sharing

You are now at the sharing stage! You need to be well prepared because several judges will come to visit your booth! You should at least present these few elements to the judges:

1. What is the name of your creature? What family does it belong to?
2. How does it move? Explain the movement you created using robotics.
3. Describe its environment. What does it eat, does it have predators?
4. What is its role in the ecosystem of Planet Z?
5. What inspired you to invent this creature?

A Few Rules to Follow

- A team consists of two to three students.
- Your creation must fit on a table measuring 100 cm by 60 cm.
- You must proudly display the name of your creature on your poster.
- It's helpful to write down what you want to talk about on your presentation board but avoid reading word for word! You need to speak to the judges!
- The team has a maximum of 4 minutes to make their presentation and answer questions. There will be many people present, so practice speaking loudly!



Point Table

Criteria	Score
The model is well thought out and detailed	/5
The method / mechanism to put the creature into action is original and shows movement.	/5
All students have participated in the presentation	/5
The students answered the questions well	/5
The presentation was animated and dynamic	/5