



WORLD ROBOT OLYMPIAD™

Future Innovators

Season Challenge

Season 2024



Earth Allies

AGE GROUPS ELEMENTARY, JUNIOR AND SENIOR

Official Game Rules for the WRO International Final.

Version: January 15th 2024

(Note: Rules for local WRO events may vary!)

WRO International Premium Partner



Earth Allies

INTRODUCTION

As human beings we have a strong connection with the world around us, even though we sometimes forget it in our modern lives. We rely on the Earth for food, energy, and many things we use every day. We also need to deal with natural events that can be destructive. Robots can help us live in places where nature is dangerous or harsh, and they can also assist us in living a more environmentally friendly lifestyle.

Your robot mission:

For the 2024 WRO Future Innovators category, **teams have the task to develop a robot model which helps people to live in harmony with nature.** Teams may choose one of the two areas (1, 2) to work on, but they can also choose to work on a project that focuses on a combination of the two areas.

Area 1 – Sustainable Future

Humans have always invented new things, and the industrial revolution has made goods and technology widely available, while also increasing the industrialization of our food production. However, we now recognize that we have been harming our planet in the process. We understand the need for change, but we also like our modern way of life. Who would want to return to a time when we had to grow all our own food and did not have electricity? And who would want to live without the internet, sneakers and robots?

If we want to keep the earth liveable for the coming generations, we need to live our modern life in a green and sustainable way. We need to explore green alternatives for the products we use in our daily life, and we need to adopt environmentally friendly technologies. Robots can play a significant role in this process.

Can your team develop a robot model helps to make a part of our modern lifestyle more sustainable?

Area 2 – The Force of Nature

Humans have always settled in areas that offer favourable opportunities. People live on the side of active volcanoes because the soil is fertile there. Cities have emerged near rivers or the sea because they offer trading possibilities, even when there is a risk of flooding. And sometimes people find themselves living in regions with natural threats such as earthquakes, cyclones, droughts, and forest fires.

We cannot prevent these natural phenomena from occurring, so we must discover ways to coexist with them. Modern technology has helped us in predicting and understanding certain disasters, allowing us to prepare and save lives. Robots can enhance our capabilities to predict natural threats and can help prevent excess damage, as they can perform tasks beyond human capacity. And robots can assist in the process of rebuilding since we need to accept that natural disasters cannot always be avoided. Robots can enable humans to continue living in areas where natural phenomena pose a potential threat.

Can your team develop a robot model that can help to prevent damage from natural disasters or work to recover from their impact on our living spaces?

For the sub-themes mentioned above (Sustainable Future and The Force of Nature) you can find a connection and inspiration using the Sustainable Development Goals.

- *Goal 12: Responsible Consumption and Production*
- *Goal 13: Climate Action*
- *Goal 15: Life on Land*

You can look at the UN website to understand the goals in detail:

<https://www.un.org/sustainabledevelopment/sustainable-development-goals/>