

Is there life beyond Earth?

with Dame Dr Maggie Aderin-Pocock

Royal Institution Christmas Lectures Activities

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In this year's CHRISTMAS LECTURES from the Royal Institution (Ri) supported by CGI, Dr Dame Maggie Aderin-Pocock will take us on an epic voyage through time and space.

Scientists in 2025 detected the 'strongest hint yet' of biological activity outside our solar system on exoplanet K2-18b, sparking growing excitement about the real possibility of extraterrestrial life. In this series of lectures, Maggie sets out on a journey to find it.



KS2 Space Debate

Galactic Council: Space Decisions for Planet Earth

This is a Key Stage 2 debate activity.

Learning Objectives:

- To take part in a debate by sharing ideas and listening to others.
- To use evidence and imagination to explain point of views about space exploration.

Timing 45-60 minutes. Groups of 6 or less.

Overview

"The year is 2050. A new planet, Drava, has been discovered. It has breathable air, strange glowing plants, and signs that life might exist. Earth is becoming crowded, and resources are stretched. Your council must decide: should we send humans to live there? Who should go? And what are the risks?"

Each role gives you your priorities, you'll form your own opinion using the facts.

Structure

Opening statements: each person introduces their role and shares what they care about

Discussion: the group debates, using *Curiosity cards* and *Evidence cards* to spark ideas

Decision time: everyone votes to find the final decision

Reflection: discuss together:

- What changed your mind?
- Which arguments were strongest?
- Would you personally go to another planet if you had the chance?

Optional Extensions

- Create "Mission Posters" explaining the Mission going to explore the planet

Space Explorer I lead space missions. I want my crew to be safe and successful.
Alien life researcher I study signs of life. I want to know if life exists but I want to study it carefully.
Historian I know exploration has brought both progress and problems in the past. Should we risk repeating mistakes?
Farmer I grow food which humans need to survive. Should we go before we know food can grow there?
Artist I believe humans need creativity. Should art and culture be included in the first mission, or only survival skills?
Robot Engineer I build robots which explore without risking human lives. But can machines do the job as well as people?

Role cards

Curiosity cards

What if we meet life forms we don't understand?
What will happen to Earth if too many people leave?
If we leave, who gets chosen to go – and who stays behind?
If robots can explore safely, should humans go at all?
How would families feel if people left Earth for good?

Evidence cards

The space mission will cost as much as 250,000 hospitals.
Robots don't need food, water, or air
The journey will take 21 years
New technology for space missions often leads to inventions on Earth e.g. water filters
Taking people to Drava could reduce pressure on Earth's resources
Exploring Drava might lead to new medicines or discoveries that help Earth
Long journeys in space mean children who leave Earth might never see it again
Missions like this could inspire young people to learn science and engineering