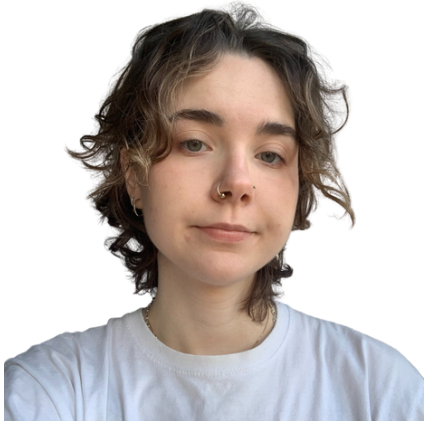
Introduction to Astronomy Children's Course

We are very excited to be offering a termly, 8 week introduction to astronomy, led by KKH tutor, Cecilia Bondestam. Cecilia is currently completing her Master's in Astrophysics at the University of Edinburgh, with her research project focused on galaxy data from the new James Webb Space Telescope. She has had a passionate (what she terms 'nerdy') interest in all things outer space since a very young age, and hopes to make some of the most mind boggling phenomena accessible to any curious child.

The course will consist of x8 one hour lessons (one lesson per week) spread across the course of an academic term. We will aim to split the course so that there are 4 sessions each side of half term. The lessons will be held over Zoom with class size capped at 6 students to ensure every child receives the attention they need to thrive and enjoy their learning.

Cecilia will guide the children through a variety of app-based learning, physical demonstrations, debate work, creative design and storytelling to animate the subject matter of Space! Cecilia's teaching style places emphasis on practical and interactive elements to stimulate group work, discussion and bring theory to life.



Course Outline

Lesson 1: The relationship between humans, our Earth, the Solar System and Space! A basic introduction.

We will discuss the concept of gravity as well as exploring the order and key properties of the planets in relation to the Sun.

Lesson 2: Why do we have night and day?

This will help the children to understand the rotation of the planets and make the connection between our daily lives on Earth and how this connects to Outer Space.

Lesson 3 & 4: Rocky and Gaseous Planets

We will delve deeper into the properties of the planets, looking at the rocky (Mercury, Venus, Earth, Mars) and gaseous (Jupiter, Saturn, Uranus and Neptune) planets in turn. We will discuss what makes each planet unique as well as their commonalities.

Lesson 5: The Moon, Satellites and the ISS

We will explore other objects in space, including our Moon, satellites, the International Space Station and using telescopes to understand these.

Lesson 6: The Sun and Stars and Strange Space Theories

We will look at the historical trajectory of our understanding of space through heliocentrism vs geocentrism and our understanding of the evolution of stars.

Lesson 7: Constellations via Mythology

We will spend this session exploring the mythology and history behind various constellations, and how they were used to navigate.

Lesson 8: Informal Quiz Recap

We will run through an informal quiz to check student's understanding and summarise their knowledge.