# TY Astronomy

**Subject**: Astronomy

**Number of Periods per week**: 2

**Class Teacher**: Colum McNamee CME

## Aims and objective:

The course is designed for students who have no prior knowledge of astronomy. Course aimed at looking at exploring fascinating topics, designed to ignite curiosity without having to understand the physics and mathematics behind the discoveries. Each week students will participate in various topics with visual mediums to enhance their understanding of the universe. Students at the end of the course will have the opportunity to visit the local observatory as well as a greater understanding to the world beyond their daily lives

## Course content:

- The Stars and planets.
- Exploration of current theories explaining Dark matter and Dark energy.
- Deep Space.
- Introduction to Quantum mechanics and General Relativity.
- Astronomy Tools.
- Mathematics in the Universe.
- Possibility of intelligent life.
- Space travel and the new private space race.
- Current understandings of Black holes.
- Exoplanets. Astrobiology, Detection methods and Planet formation
- Hubble's Law and Hubble's telescope.
- Manmade satellites and spacecraft in use.

**Method of assessment:**

- Successful completion of detailed essays on topics we have covered in class. Essays must be typed, original and backed up by reputable facts and scientific method.
- In class participation- discussing and creating questions in groups.
- Completion of a 30 minute in class exam in week 3 and week 6 based on the course content completed.
- Group activity demonstrating a current theory/ idea/ interest through a short presentation/ powerpoint/ video..

Class trip will be organised for a Wednesday evening to Dunsink Observatory ( 5 minutes away). The trip will be optional. It will have an hour speaker with questions and answers at the end and then a chance to look through the telescope at the moon or one of the planets depending on what time of the year it is. Trip is dependant on accessibility due to COVID-19

**Digital Learning Skills :**

Students will work on their essays using online resources and digital media. Students are all connected using Microsoft Teams as well as One note to enhance connectivity and learning within the course.