

Astronomy 1

Students explore the universe from planets, moons and stars to solar systems, galaxies and beyond! Students will learn about types of galaxies, quasars and the expansion of the universe before moving onto the life-cycle of stars, supernovae, black holes, and the use of spectroscopy. The class will learn more about the bodies within our solar system. Each class involves discussion and hands-on learning including labs, model creation and instrument building.

Week 1: The Universe

- Introduction to the Universe via a 'sorting' game involving the age, size and distance of different astronomical bodies
- Model the formation of different-shaped galaxies
- Model the expansion of the universe
- Experiment to show how quasars are used in discovering more about our universe

Week 2: Stars

- Model the life-cycle of a star
- Experiment with how spectroscopy is used in observing and identifying stars
- Model the formation of supernovae and black holes

Weeks 3-4: Our Solar System – The Sun

- Learn about the Sun and why it is important
- Discover sunspots and what they tell us about the movement of the sun
- Make a magnetometer to learn more about magnetic solar storms

Weeks 4-5: Our Solar System – The Inner Planets

- Virtual trip to the Terrestrial planets – Mercury, Venus, Earth and Mars
- Learn about how planetary atmospheres and weather form
- Start creating a scale model of the Solar System

Weeks 6-7: Our Solar System – The Outer Planets

- Virtual trip to the Gaseous planets – Jupiter, Saturn, Uranus and Neptune
- Learn about planetary moons
- Complete creating a scale model of the Solar System