

Expectations and Outcomes

Grade Level/Course: 10-12

Content Area: Science

Unit Title	Guarantees
Introduction to Astronomy	<ul style="list-style-type: none"> • Describe and use the sampling method to calculate the number of stars visible in the night sky. • Explain the differences between planets. • Make observations of stars and other phenomena in the sky. • Use tools to make observations of space. • Explain what the Northern Lights are. • Construct an explanation of the moon changing and test your predictions.
Planetary Motion	<ul style="list-style-type: none"> • Describe the process to determine the size of the Earth. • Use Kepler's 1st law to model the pattern of planetary motion. • Model Kepler's 2nd law of planetary motion. • Model Kepler's 3rd law to model three patterns of planetary motion. • Model patterns of interactions between the Earth and the moon.
Space Exploration	<ul style="list-style-type: none"> • Explain the differences between comets and asteroids. • Identify different areas on the moon. • Calculate the density of planets. • Demonstrate how to make a robot move through a course. • Identify how the amount of sunlight changes over the seasons. • Identify parts of a star's life cycle. • Explain theories of the Big Bang.