

Curriculum at a Glance

Earth Science

Level: 300

Grades 10 - 12

This course satisfies the 10th grade science requirement at Darien High School. Interwoven in the course are important unifying themes (examples: earth as a system of interacting spheres, the theory of plate tectonics, the nebular theory for the formation of the earth and solar system). Students who take this course will explore the solid earth (planet earth's structure and processes), earth's atmosphere (weather on earth), earth's hydrosphere (earth's water), and astronomy (stars, galaxies, and the solar system). The course provides students with opportunities to develop critical scientific thinking skills, while obtaining a fundamental knowledge of the disciplines of earth science.

Unit of study	Essential Content
Introduction to Earth Science	<ul style="list-style-type: none">• This unit provides students with opportunities to explore and build foundational knowledge including such topics as the interactions among earth's primary spheres, methods of scientific inquiry that are applicable to studying earth, and modeling planet earth using historical and modern techniques.• Laboratory investigations emphasise practical application of scientific methods of inquiry and focused investigations on the origin of our planet, its shape, size, internal heat, and the making and using of maps.
Meteorology	<ul style="list-style-type: none">• This unit provides students with an introduction to the field of meteorology. Students critically examine the nature of weather, water in the atmosphere, the movement of weather fronts, storms, forecasting the weather, and global climate.• Laboratory investigations emphasize the behavior of heat as it applies the flow of energy in the atmosphere, and the interrelationships among factors that influence local weather patterns and global climate distribution on planet earth.
Astronomy	<ul style="list-style-type: none">• This unit provides students with a comprehensive introduction to the field of astronomy. The unit examines the origins of modern astronomy, the sun, the planets of

	<p>the solar system, the earth-moon-sun system, and stars and galaxies in the universe.</p> <ul style="list-style-type: none"> ● Laboratory investigations cover diverse topics such as the tools and technologies used by astronomers, and the origin of stars, galaxies, and planets. Students have opportunities to enhance their scientific collection, observation and analytical skills.
Geology	<ul style="list-style-type: none"> ● This semester-length unit provides students with many opportunities to build their knowledge about earth's minerals, rocks, and other important natural resources, plate tectonic theory, earthquakes, volcanoes, mountain building, weathering, the development of soil, erosion, surface water, groundwater, glaciers, wind waves and currents. ● Laboratory investigations provide numerous opportunities to apply scientific methods of inquiry as they relate to the study of the solid earth, its structures, hazards, evolution and surface processes.