

EARTH AND ENVIRONMENTAL SCIENCE

Tuesdays, September 12-December 12 (No class Oct 10 and Nov 21; 12 weeks)

11:15am-12:45pm

Ages 11+

In this fall semester course, we explore and reinforce our knowledge of the biological and physical principles related to the environment in which organisms live on Earth. Students learn through hands-on experiments as they strengthen their observational and data recording skills with topics ranging from the Earth's core to its outermost atmospheric layers reaching into space. In the spring semester, we will continue this topic as we continue to discuss the Earth's composition, structure, and processes. All lab costs are included in the registration fee.

LAB SCHEDULE:

HABITABLE EARTH - Tuesday, September 12

We explore Earth's structure and position in relation to the known universe, and how these conditions create a habitable environment on our planet.

EARTH'S PROCESSES - Tuesday, September 19

Students study the ever-changing processes of the Earth, such as the movement of plates, earthquakes, weather, and climate, and how they affect ecosystems and organisms.

SCIENCE OF WATER - Tuesday, September 26

Students review the importance of water to the environment, model how it cycles throughout the planet, and investigate impacts on natural flow and availability of water.

SOILS AND MINERALS - Tuesday, October 3

We study the role of soils and minerals in the health of our ecosystems as we conduct soil titrations to analyze soil acidity, matter content, and other characteristics.

INDIVIDUALS AND POPULATIONS - Tuesday, October 17

We investigate our classification of life from organism to ecosystem, and study how individuals interact with their environment and how populations change over time.



COMMUNITIES AND ECOSYSTEMS - Tuesday, October 24

This week, we study the structure and organization of communities and ecosystems and influences that change them over time.

POPULATION GROWTH - Tuesday, October 31

Students investigate population growth models and the interdependence of environmental and ecological conditions on population sizes.

BIODIVERSITY – Tuesday, November 7

Students study biological diversity as we calculate diversity indices and species richness within a community and learn how biodiversity is important in a healthy ecosystem.

CONSERVATION BIOLOGY - Tuesday, November 14

In this class, students learn about the science of conserving at-risk species and ecosystems and the strategies used to increase population numbers and biodiversity.

FORESTRY AND AGRICULTURE - Tuesday, November 28

Students learn about forest farming and alternative agriculture methods, including hydroponics, that produce crops in a sustainable way.

RENEWABLE AND NON-RENEWABLE ENERGY - Tuesday, December 5

Students explore the concepts of renewable and non-renewable resources as they experiment with alternative fuel sources.

POLLUTION - Tuesday, December 12

We study point and nonpoint sources of water, soil, and air pollution, and develop scientific strategies to minimize impacts and clean polluted environments.

Location: Discover Science Center - Peachtree City

Course fee: \$308 or \$28/lab

10% sibling discount