This course focuses on ecology, which is the branch of biology that deals with interactions between organisms and their environments. This course covers ecosystems dynamics, as well as the basic principles of earth science. Students will also study the effects of human activities on ecosystems, including the release of pollution, solid waste management, resource management, and energy conservation. Emphasis is placed on how individuals can help to conserve Earth's environments for current and future generations.

This course is built to Virginia's standards for ecology.

Length: Two Semesters

Unit 1: Introduction to Ecology

- Biology as Science
- Connections in Biology
- Doing Science
- Introduction to Ecology Wrap-Up

Unit 2: Where Is Earth?

- Our Home
- Our Neighborhood
- Planet Earth
- Where Is Earth? Wrap-Up

Unit 3: The Rock We Live On

- Minerals
- Igneous and Sedimentary Rocks
- Metamorphic Rocks and the Rock Cycle
- The Rock We Live On Wrap-Up

Unit 4: Nutrients and Their Cycles

- Land and Air
- The Building Blocks of Life
- Biogeochemical Cycles
- Nutrients and Their Cycles Wrap-Up

Unit 5: Semester 1 Review and Exam

Unit 6: All the Time in the World

- Measuring Time
- The Past is Vast
- No Time Like the Present
- All the Time in the World Wrap-Up

Unit 7: Earth's Ecosystems

- Ecosystems

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- The Blue Planet
- Matter and Energy
- Earth's Ecosystems Wrap-Up

Unit 8: Our Changing Biosphere

- Populations
- Solutions For the Future
- Earth's Resources
- Our Changing Biosphere Wrap-Up

Unit 9: Energy Matters

- Energy in the World
- Nuclear Energy
- Earth Matters
- Energy Matters Wrap-Up

Unit 10: Semester 2 Review and Exam

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