



# Kelloggsville Virtual School

---

## **Biology**

Course Description

2 Semesters; 1 credit

Biology focuses on the mastery of basic biological concepts and models while building scientific inquiry skills and exploring the connections between living things and their environment.

The course begins with an introduction to the nature of science and biology, including the major themes of structure and function, matter and energy flow, systems, and the interconnectedness of life. Students then apply those themes to the structure and function of the cell, cellular metabolism, and biogeochemical cycles. Building on this foundation, students explore the connections and interactions between living things by studying genetics, ecosystems and natural selection, and evolution. The course ends with an applied look at human biology.

Scientific inquiry skills are embedded in the direct instruction, wherein students learn to ask scientific questions, form and test hypotheses, and use logic and evidence to draw conclusions about the concepts.

Lab activities reinforce critical thinking, writing, and communication skills and help students develop a deeper understanding of the nature of science.

This course is built to state standards and informed by the National Science Education Standards (NSES). **"Dry" Labs require no materials other than a spiral notebook. Hands on Labs require a list of materials that a teacher will share at the beginning of the course if applicable.**

**Unit 1: Introduction to Biology**

**Unit 2: The Chemistry of Biology**

**Unit 3: Cells**

**Unit 4: Energy Transfer**

**Unit 5: Earth's Resources**

**Unit 6: Semester 1 Review and Exam**

**Unit 7: DNA and Heredity**

**Unit 8: DNA to Protein**

**Unit 9: Ecosystems and Natural Selection**

**Unit 10: Evolution and Classification**

**Unit 11: Human Biology**

**Unit 12: Semester 2 Review and Exam**