

HONORS BIOLOGY

Honors Biology at Shawnee Mission East is a rigorous class designed for students who are committed to challenging themselves with an advanced science curriculum at an accelerated pace.

PREREQUISITE SKILLS: *Students who enroll in this course should already. . .*

- have succeeded in previous science classes; have earned a grade of "A" every quarter in these classes
- be advanced vocabulary learners; be able to easily memorize and use new terms
- be capable of following written instructions and successfully complete laboratories
- have developed the skills necessary to identify and design a testable scientific experiment

WORK ETHIC EXPECTATIONS: *Students who enroll in this course should be able and willing to. . .*

- master new vocabulary words associated with each unit of study
- remain current with assigned readings and assignments
- participate actively and productively in class activities
- demonstrate time management and self-discipline
- complete all assigned homework assignments

Course Description:

Biology1 Honors emphasizes learning biological principles and scientific problem solving through an inquiry approach, open-ended investigations, and independent research. Technology and outside reading of current literature provide additional enrichment.

Primary Objectives:

- Given a researchable topic, identify a problem and design an experimental procedure with an option to conduct the research.
- Access, analyze, and evaluate information using multiple resources.
- Communicate scientific understanding using oral and written language, tables, graphs, and appropriate statistical tools.
- Explain how cells perform life processes.
- Explain the molecular and cellular basis of heredity.
- Identify the major structures and functions of plant and animal systems and illustrate an understanding of their relationship to each other.
- Explain the evidence for the Theory of Evolution and the organization of the biological classification system.
- Apply an understanding of the interdependence of organisms and factors in the biosphere.
- Apply an understanding of human ecology.
- Apply the concept of energy flow and productivity through ecosystems.
- Explain some biotechnical processes and their applications.
- Express an opinion toward bioethical issues based on information gathered.
- Appreciate significance of human endeavors in biological science.