

## **Honors: Biology**

Biology is an in-depth course that furthers mastery of scientific skills, fosters a deep understanding of key concepts, and promotes the application of the scientific method to biological topics. 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 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. Lab activities reinforce critical thinking, writing, and communication skills and help develop a deeper understanding of the nature of science. Biology students are frequently asked to respond to scientific problems and issues via written assignments. Moreover, Exploration activities challenge Honors students to deconstruct scientific claims, analyze scientific articles, and suggest follow-up experiments or topics for further research. The content is based on the National Science Education Standards (NSES) and is aligned to state standards.