



## McLean High School Course Description and Expectations for AP Biology/Senior Science Investigations

**Prerequisites:** Passing score on the Biology, Chemistry and Algebra II SOL's

**Corequisites:** Senior Science Investigations

**Short Course Description:** The two main goals of AP Biology/Senior Science Investigations are to help students develop a conceptual framework for modern biology and to help students gain an appreciation of science as a process. Primary emphasis in AP Biology is to develop an understanding of concepts rather than a memorization of terms and technical details. Emphasizing concepts and their real world applications over facts, makes the course less overwhelming and more meaningful. AP Biology students participate in an ecology field trip, conduct research in enzyme analysis and perform complex labs in biotechnology, including bacterial transformations, DNA extractions, amplifications by Polymerase Chain Reactions and DNA "fingerprinting" using gel electrophoresis, to name a few. Overall, the AP Biology course stresses the application of biological knowledge and critical thinking to environmental and social concerns.

**Summer Assignment:** None

**Work Load during the School Year:** 1.5-2 hours of homework per night, 1-2 AP essays and/or article reviews per week, 1 quiz per week, 2-4 group lab reports per month, 2 unit tests per month.

**Special Course Information:** A field trip to conduct hands-on marine science research and to learn to appreciate the importance of various ecosystems will occur the first semester. A major ecology project will assess this learning. **Classes meet each day for 90 minutes.**

**Available Support:** Teacher is available after school to work with students daily.

**Student Quotes:** "Learning in AP Biology is easy and meaningful since the subject pertains to real life so often. Though there is a lot of hard work involved, it is manageable. I found the class enjoyable and special activities like the Wallops Island trip make it memorable."

"The work in AP Biology is demanding, but as long as sufficient time and effort are applied, you will be rewarded."

"AP Biology is an incredibly interesting and illuminating course because of all the opportunities for hands-on learning. It is a well-taught course that all students should consider taking, even if they are not contemplating careers in the sciences."

**Please sign indicating that you have read and understand the nature of this AP course.**

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Student signature

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Parent signature

