Syllabus
Advanced Placement Biology
Marquette University High School
Keith Klestinski, Instructor
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Campbell Biology Website: [www.campbellbiology.com](http://www.campbellbiology.com)
Other Media: *Campbell Biology Student Media CD-ROM* (accompanies text cited above)

Mr. Klestinski’s Biology Web at [http://faculty.muhs.edu/klestinski/](http://faculty.muhs.edu/klestinski/) (class policies available on website)

### Semester I

<table>
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<tr>
<th>Unit</th>
<th>Description</th>
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<tr>
<td>Intro</td>
<td>Introduction to AP Biology&lt;br&gt;Reading: Chapter 1&lt;br&gt;Major Unifying Themes in Biology&lt;br&gt;Science as a Process – Scientific Methodology&lt;br&gt;Lab: Scientific Investigation (Morgan-Carter #1)</td>
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<td>Unit 1</td>
<td>Ecology – Environmental and Behavioral Biology&lt;br&gt;Reading: Chapters 51, 50, 52, 53, 54, 55&lt;br&gt;Lab: AP Lab # 11 - Animal Behavior and Termite Behavior Labs&lt;br&gt;Lab: Bluegills - Size Selective Predation and Visual Foraging Behavior Labs&lt;br&gt;Lab: AP Lab #12 – Dissolved Oxygen and Aquatic Primary Production</td>
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<td>Unit 2</td>
<td>The Chemistry of Life&lt;br&gt;Chapters 2, 3, 4, 5&lt;br&gt;Lab: Atomic Structure, Bonding, H₂O and pH&lt;br&gt;Lab: Protein Structure and Behavior&lt;br&gt;Computer Lab: Amino Acid Structure</td>
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<td>Unit 3</td>
<td>Cell Structure and Function&lt;br&gt;Chapters 7, 8, 11, 12, 13&lt;br&gt;Lab: AP Lab #1 Osmosis and Diffusion&lt;br&gt;Lab: AP Lab #3 - Mitosis and Meiosis</td>
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<td>Unit 4</td>
<td>Cell Energetics&lt;br&gt;Chapters 6, 10, 9&lt;br&gt;Lab: AP Lab #2 - Enzyme Catalysis&lt;br&gt;Lab: AP Lab #4 - Plant Pigments and Photosynthesis&lt;br&gt;Lab: AP Lab #5 - Cell Respiration &amp; Spectrophotometer 20 Demo</td>
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<td>Unit 5</td>
<td>Molecular Biology&lt;br&gt;Chapters 16, 17, 18, 19, 20&lt;br&gt;Lab: DNA Extraction (Human and Plant)&lt;br&gt;Lab: AP Lab #6 - Molecular Biology – DNA Bacterial Transformation&lt;br&gt;Lab: AP Lab #6 - Molecular Biology – DNA Gel Electrophoresis</td>
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Semester I Final Exam: Wednesday, December 18th – Cumulative Final

* Christmas Break Assignment: Read *The Beak of the Finch* by Jonathan Weiner – Due by January 30th
Semester II

Unit 6  Genetics
Chapters 14, 15, 21
Lab: Frequency of Crossing Over in Sordaria and Gene Linkage Mapping
Lab: AP Lab #7 - Genetics of Organisms - Part I: Fruit Fly Life Cycle and Inheritance
Lab: AP Lab #7 - Chi-Square Analysis - Part II: Fruit Fly Data and M & M’s

Unit 7  Evolution and Diversity of Life
Chapters 22-28, 31
Lab: AP Lab #8 - Population Genetics: Hardy-Weinberg Equilibrium/Teddy Graham Evolution
Lab: Macroevolution – Gradualism and Punctuated Equilibrium
Lab: Bioinformatics – Comparative Cladistic Analysis of Protein
Analytical Paper: "Beak of the Finch"

Unit 8  Animals: Diversity and Organization
Chapter 32, 33, 34
Lab: Animal Diversity Lab I (Morgan/Carter #17)
Lab: Animal Diversity Lab II – Taxonomic Keys (Morgan/Carter #18)

Unit 9  Animals: General Structure and Systems
Chapters 40-49
Lab: AP Lab #10 – Physiology of the Circulatory System
Lab: Vertebrate Anatomy I (Morgan/Carter #21)
Lab: Vertebrate Anatomy III (Morgan/Carter #23)

Unit 10  Plants: General Structure and Systems
Chapters 29, 30
Lab: AP Lab #9 Transpiration
Lab: Plant and Flower Anatomy (Morgan/Carter #19)
Lab: Plant Growth and Hormonal Response (Morgan/Carter #20)

AP Exam:  Monday May 11th (morning session)

Post Exam  Lab: Shark Dissection
Ethics of Genetic Engineering "GATTACA"

AP Exam Review Sessions:  Sunday 4/26 (3:00 pm – 6:00 pm)
                          Sunday 5/3 (3:00 pm – 6:00 pm)

Updated:  August 22, 2008