

## AP Biology Power Standards and Benchmarks

<b>Standard 1: Understands and applies principles of scientific inquiry</b>				
<i>Concepts: Scientific Reasoning, Conducting Scientific Investigations, Safety</i>				
<b>Course Level Benchmarks</b>	<b>Vocabulary</b>	<b>Knowledge</b>	<b>Skills</b>	<b>Classroom Resources</b>
A. Formulates and revises scientific explanations and models	<ul style="list-style-type: none"> <li>• scientific explanation</li> <li>• scientific model</li> <li>• data</li> <li>• within tolerance</li> <li>• scientific method</li> </ul>	<ul style="list-style-type: none"> <li>• Knows scientific explanations and models are based on data</li> <li>• Know new data may lead to the modification of scientific explanations and models</li> </ul>	<ul style="list-style-type: none"> <li>• Analyzes data with respect to scientific explanations and models.</li> <li>• Adjusts scientific explanations and models based on data.</li> </ul>	AP Biology Curriculum Guide  Emphasized throughout the entire curriculum
B. Understands how scientific knowledge changes with new evidence	<ul style="list-style-type: none"> <li>• scientific knowledge</li> <li>• evidence</li> <li>• influence</li> <li>• ethics</li> </ul>	<ul style="list-style-type: none"> <li>• Knows examples of scientific knowledge that changed when new evidence was presented</li> <li>• Knows that science is an ongoing process and is always open to new ideas</li> </ul>	<ul style="list-style-type: none"> <li>• Describes how biology concepts have evolved with the discovery of new evidence.</li> <li>• Hypothesizes how current biology concepts and practices will influence future societies.</li> </ul>	
C. Uses technology and mathematics to perform accurate scientific investigations and communications	<ul style="list-style-type: none"> <li>• technology</li> <li>• mathematics</li> <li>• probability</li> <li>• ratio</li> <li>• accuracy</li> <li>• scientific investigations</li> <li>• scientific communication</li> </ul>	<ul style="list-style-type: none"> <li>• Knows how technology can help scientific investigations and communications</li> <li>• Knows mathematical computations and formulas are essential to scientific investigations</li> </ul>	<ul style="list-style-type: none"> <li>• Determines technologies most appropriate to use given a particular situation.</li> <li>• Uses the necessary mathematics for a particular situation.</li> <li>• Calculates results with a given degree of accuracy.</li> </ul>	
D. Demonstrates safe handling procedures	<ul style="list-style-type: none"> <li>• OSHA</li> <li>• EPA</li> <li>• MSDS</li> <li>• Right to Know</li> <li>• hazardous</li> <li>• safety procedures</li> </ul>	<ul style="list-style-type: none"> <li>• Knows appropriate safety procedures for a given situation</li> <li>• Knows where safety devices are located in the classroom</li> <li>• Understands the process of waste disposal</li> </ul>	<ul style="list-style-type: none"> <li>• Follows required safety procedures.</li> <li>• Recognizes, reports, and corrects safety problems.</li> <li>• Follows waste disposal procedures</li> </ul>	

## AP Biology Power Standards and Benchmarks

Standard 2: Understands and applies principles of life science				
<i>Concepts:</i>				
Course Level Benchmarks	Vocabulary	Knowledge	Skills	Classroom Resources
A. Recognizes the correlation of structure and function of living organisms	•	•	•	AP Biology Curriculum Guide

Standard 2: Understands and applies principles of life science				
<i>Concepts:</i>				
Course Level Benchmarks	Vocabulary	Knowledge	Skills	Classroom Resources
B. Develops critical thinking skill and research techniques through laboratory investigations	•	•	•	AP Biology Curriculum Guide

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Standard 2: Understands and applies principles of life science				
<i>Concepts:</i>				
Course Level Benchmarks	Vocabulary	Knowledge	Skills	Classroom Resources
C. Understands regulation and homeostasis in cellular systems	•	•	•	AP Biology Curriculum Guide

Standard 2: Understands and applies principles of life science				
<i>Concepts:</i>				
Course Level Benchmarks	Vocabulary	Knowledge	Skills	Classroom Resources
D. Understands the continuity and evolution of life	•	•	•	AP Biology Curriculum Guide