Exam Overview

The AP Biology Exam assesses student understanding of the science practices and learning objectives outlined in the course framework. The exam is 3 hours long and includes 60 multiple-choice questions and 6 free-response questions. A four-function, scientific, or graphing calculator is allowed on both sections of the exam. The details of the exam, including exam weighting and timing, can be found below.

Section	Question Type	Number of Questions	Exam Weighting	Timing
I	Multiple-choice questions	60	50%	90 minutes
II	Free-response questions	6	50%	90 minutes
	Question 1: Interpreting and Evaluating Experimental Results (9 pts)			
	Question 2: Interpreting and Evaluating Experimental Results with Graphing (9 pts)			
	Question 3: Scientific Investigation (4 pts)			
	Question 4: Conceptual Analysis (4 pts)			
	Question 5: Analyze Model or Visual Representation of a Biological Concept or Process (4 pts)			
	Question 6: Analyze Data (4 pts)			

The exam assesses content from each of four big ideas for the course:

1. Evolution

2. Energetics

3. Information Storage and Transmission

4. Systems Interactions

How Student Learning Is Assessed on the AP Exam

All six AP Biology science practices are assessed on every AP Biology Exam in both the multiple-choice and free-response sections as detailed below.

Science Practice	Multiple-Choice Section	Free-Response Section
1: Concept Explanation	Individual and set-based multiple-choice questions will assess students' ability to explain biological concepts, processes, and models presented in written format. Students will need to describe and explain these concepts, processes, and models in both conceptual and applied contexts.	Free-response questions 1, 2, 3, 4, and 5 include one point per question that assess Science Practice 1.
2: Visual Representations	Individual and set-based multiple-choice questions will assess students' ability to analyze visual representations of biological concepts and processes. Students will need to describe characteristics of a biological concept, process, or model represented visually, as well as explain relationships between these different characteristics. Additionally, students will need to explain how biological concepts or processes represented visually relate to larger biological principles, concepts, processes, or theories.	Free-response question 5 focuses primarily on Science Practice 2.
3: Questions and Methods	Individual and set-based multiple-choice questions will assess students' ability to determine scientific questions and methods. Students will need to identify a testable question, state the null hypothesis or predict the results of an experiment, identify experimental procedures, and propose new investigations.	Free-response questions 1 and 3 focus on Science Practice 3.

Science Practice	Multiple-Choice Section	Free-Response Section
4: Representing and Describing Data	Individual and set-based multiple-choice questions will assess students' ability to describe data from a table or graph. Students will need to identify specific data points, describe trends or patterns, and describe relationships between variables	Free-response questions 2 and 6 focus on Science Practice 4. Free-response question 1 also assesses this practice.
5: Statistical Tests and Data Analysis	Individual and set-based multiple-choice questions will assess students' ability to perform statistical tests and mathematical calculations to analyze and interpret data. Students will need to perform mathematical calculations, use confidence intervals, perform chi-square hypothesis testing, and use data to evaluate a hypothesis or prediction.	Free-response questions 1 and 2 assess students' ability to perform a mathematical calculation. Free-response question 6 assesses students' ability to use data to evaluate a hypothesis or prediction.
6: Argumentation	Individual and set-based multiple-choice questions will assess students' ability to develop and justify scientific arguments using evidence. Students will need to make scientific claims, support claims with evidence, and provide reasoning to justify claims. Additionally, students will need to explain relationships between experimental results and larger biological concepts, processes, or theories. Finally, students will need to predict the causes or effects of a change in, or disruption to, one or more components in a biological system.	Free-response questions 1, 2, 3, 4, and 6 include points that assess Science Practice 6.

Section I: Multiple-Choice

The first section of the AP Biology Exam includes 60 multiple-choice questions appearing either as individual questions or in sets of typically 4–5 questions each. All six AP Biology science practices are assessed in the multiple-choice section with the following exam weightings:

Science Practice	Exam Weighting
1: Concept Explanation	**25–33%**
2: Visual Representations	**16–24%**
3: Questions and Methods	**8–14%**
4: Representing and Describing Data	**8–14%**
5: Statistical Tests and Data Analysis	**8–14%**
6: Argumentation	**20–26%**

Section II: Free-Response

The second section of the AP Biology Exam includes two long questions and four short-answer questions. Each of the four short-answer questions will focus on a different big idea and a different unit of instruction.

Free-response question 1: Interpreting and Evaluating Experimental Results is a 9-point question that provides students with an authentic scenario and accompanying data, presented in a table, graph, or both. This question assesses student ability to do the following in four question parts:

- Part A (1 point): Describe biological concepts, processes, or models.
- Part B (3 points): Identify experimental methods or describe data.
- Part C (3 points): Identify experimental methods, analyze data, or perform calculations.
- Part D (2 points): Make and justify predictions.

Free-response question 2: Interpreting and Evaluating Experimental Results with Graphing is a 9-point question that presents students with an authentic scenario accompanied by data in a table. This question assesses students' ability to do the following in four question parts:

- Part A (1 point): Describe biological concepts, processes, or models.
- Part B (4 points): Construct the appropriate graph from the data provided.
- Part C (2 points): Analyze data, perform calculations, state a null hypothesis, or predict results of an experiment.
- Part D (2 points): Make and justify predictions.

Free-response question 3: Scientific Investigation is a 4-point question that presents students with a description of a lab investigation scenario. This question assesses students' ability to do the following in four question parts:

- Part A (1 point): Describe biological concepts or processes.
- Part B (1 point): Identify experimental procedures.
- Part C (1 point): State the null hypothesis or predict the results of an experiment.
- Part D (1 point): Justify predictions.

Free-response question 4: Conceptual Analysis is a 4-point question that presents students with an authentic scenario describing a biological phenomenon with a disruption. This question assesses students' ability to do the following in four question parts:

- Part A (1 point): Describe biological concepts or processes.
- Part B (1 point): Explain biological concepts or processes.
- Part C (1 point): Predict the causes or effects of a change in a biological system.
- Part D (1 point): Justify predictions.

Free-response question 5: Analyze Model or Visual Representation of a Biological Concept or Process is a 4-point question that presents students with a description of an authentic scenario accompanied by a visual model or representation. This question assesses students' ability to do the following in four question parts:

- Part A (1 point): Describe characteristics of a biological concept, process, or model represented visually.
- Part B (1 point): Explain relationships between different characteristics of a biological concept or process represented visually.
- Part C (1 point): Represent relationships within a biological model.
- Part D (1 point): Explain how a biological concept or process represented visually relates to a larger biological principle, concept, process, or theory.

Free-response question 6: Analyze Data is a 4-point question that presents students with data in a graph, table, or other visual representation. This question assesses students' ability to do the following in four question parts:

- Part A (1 point): Describe data.
- Part B (1 point): Describe data.
- Part C (1 point): Use data to evaluate a hypothesis or prediction.
- Part D (1 point): Explain how experimental results relate to biological principles, concepts, processes, or theories.