

## 2020 Advanced Placement® Biology

### About the AP® Biology Online Summer Institute

Over the course of this five-day online APSI, new and experienced teachers alike will become familiar with the *Course and Exam Description (CED) in AP Biology* for the 2020-2021 academic year. The CED organizes the AP Biology course into eight commonly taught units:

- 1: Chemistry of Life
- 2: Cell Structure and Function
- 3: Cellular Energetics
- 4: Cell Cycle
- 5: Heredity
- 6: Gene Expression and Regulation
- 7: Natural Selection
- 8: Ecology

The course curriculum clearly connects each **learning objective** to specific **essential knowledge** and includes **biology-specific science practices** that build skills to help students learn to think and act like biologists. Particularly important will be the time and skill set necessary to support teachers in implementing more inquiry-based investigations. Participants will gain experience with **investigations** in the lab manual *AP Biology Lab Investigations: An Inquiry-Based Approach* (2019) as well as explore creative alternatives to these investigations. We will also examine the **AP Biology Exam** design and essay (FRQ's) grading approaches. There will be time for participants to create a daily schedule and calendar that they may submit as part of the AP Course Audit process.

**To learn more about the AP Biology course, please go to AP Central AP Biology:**

<https://apcentral.collegeboard.org/courses/ap-biology/course/updates-2019-20?course=ap-biology>

Examples of Investigative Labs from the Student Lab Manual to be discussed during the week:

- Investigation 11: Whole Plant Transpiration
- Investigation 4: Diffusion and Osmosis and Water Potential
- Investigation 2: Mathematical Modeling – Hardy-Weinberg or Alternatives
- Investigation 13: Enzyme Catalysis
- Investigations 5 & 6: Cell Respiration and Photosynthesis
- Investigation 9: DNA Gel Electrophoresis – PCR
- Investigation 12: Animal Behavior – Pill Bugs

## **AP Biology Consultant:**

**Patricia Mote** taught biology at the high school level for over thirty years serving as department chair for many of these years. She has been an instructor and lecturer at the college level for 28 years. She holds degrees in Microbiology, Genetics, and Science Education from the University of Georgia. While serving as a consultant for the College Board since 1989, she has conducted one-day workshops and summer institutes at various schools and universities all over the country.

She has been involved with the AP Reading to score the free response questions from the AP Biology Exam since 1992, serving as reader, table leader, question leader, and exam leader. She helps develop questions based for the AP Biology Exams. She currently serves as the chair of CLEP (the College-Level Examination Program) for the Educational Testing Service and is a member of College Board's Science Advisory Committee.

During her career as a high school teacher she received numerous awards including being named high school Teacher of the Year many times and Teacher of the Year for her school district. She was named the Georgia Biology Teacher of the Year for Georgia and a Tandy Technology Scholar. In 2003, she received the Siemens Award in Biology for her work with minority students in the AP program at her school. Her students have also selected her as their STAR Teacher numerous times.

She has developed Test Banks for Human Anatomy and Physiology textbooks and for several AP Biology textbooks. She has had items published in The College Board's Materials for Professional Workshops. She serves as an editor for articles for The American Biology Teacher. She has edited numerous editions of Human Anatomy and Physiology textbooks. Other publications include articles for several microbiology journals from research conducted at the Centers for Disease Control in Atlanta and three instructors' guides for AP Biology. For 17 years during the summer months she taught a molecular biology program at the Georgia Institute of Technology in Atlanta.

Patricia resides in Atlanta, Georgia. She is currently a Lecturer and Lab Instructor for Human Anatomy and Physiology, Majors Biology, and Non-majors Biology courses at Georgia State University-Perimeter College.