AP Biology Syllabus 2025-26

Villa Rica High School

Mrs. Jessica Crowley — Room 403
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Google Classroom Codes: 5th- t4inofjv / 7th- d7kcm7mo — Remind: text @apbiovr to 81010

Course Description:

This AP Biology course is designed to offer students a solid curriculum in introductory college-level biology. It is a very demanding course that is equivalent to two college semesters of a freshman science biology course. This course is designed to prepare students for the AP Biology Exam in May. Individual colleges differ in the credit they will award for passing the AP Biology Exam, but generally those who score a 4 or 5 (out of 5) on the exam will be awarded credit for the freshman sequence of introductory biology for science majors. Those who score a 3 or better can usually earn credit for a general biology course for those not majoring in science. It is my job as your instructor to prepare you to pass the AP exam and to help prepare you for college.

AP Biology is structured around four big ideas, enduring understandings within the big ideas, and essential knowledge within the enduring understandings. Prior knowledge of high school biology and chemistry as well as the process of inquiry and the development of critical thinking skills are essential to this course.

The Big Ideas (and how they are spiraled through the units):

- **Big Idea 1:** Evolution (EVO) (Units 2, 5, 7, 8) The process of evolution drives the diversity and unity of life.
- **Big Idea 2:** Energetics (ENE) (Units 1, 2, 3, 4, 8) Biological systems use energy and molecular building blocks to grow, reproduce, and maintain dynamic homeostasis.
- **Big Idea 3:** Information Storage and Transmission (IST) (Units 1, 4, 5, 6, 8) Living systems store, receive, transmit, and respond to information essential to life processes.
- **Big Idea 4:** Systems Interactions (SYI) (Units 1, 2, 3, 5, 7, 8) Biological systems interact, and these systems and their interactions exhibit complex properties.

Science Practices:

1. Concept Explanation: Explain biological concepts, processes, and models presented in written format.
2. Visual Representations: Analyze visual representations of biological concepts and processes.
3. Questions and Methods: Determine scientific questions and methods.
4. Representing and Describing Data: Represent and describe data.
5. Statistical Tests and Data Analysis: Perform statistical tests and mathematical calculations to analyze and interpret data.
6. Argumentation: Develop and justify scientific arguments using evidence.

Course Topics:

Unit 0: Review and Required Skills
Unit 1: Chemistry of Life
Unit 2: Cell Structure and Function
Unit 3: Cellular Energetics
Unit 4: Cell Communication/ Cell Cycle
Unit 5: Heredity
Unit 6: Gene Expression and Regulation
Unit 7: Natural Selection
Unit 8: Ecology

Labs:

Approximately 25% of your time in this course will be spent in the lab. All laboratory activities require you to collect, organize, interpret, and report laboratory data. Many of the labs we complete will be inquiry labs that also require you to utilize the knowledge of science processes to design a controlled experiment. The College Board requires students to complete a minimum of eight inquiry-based investigations, two per big idea. You will be expected to develop, record, and communicate the results of their laboratory investigations and complete written lab reports of their investigative work.

Your adherence to lab safety guidelines is crucial to your success in this class.

Unexcused absences on lab day will result in a grade of zero for the lab.

Class Materials:

- Notebook
- Paper
- Pen/Pencil
- Scientific calculator
- Fully charged Chromebook
- Composition notebook for lab

Recommended:

- Graph Paper
- Colored pencils or markers
- AP Biology review book (Barrons, Pearson, etc.)

Textbook:

Campbell: Biology in Focus AP Edition. 3rd Edition. Pearson. 2019

The student will be charged full replacement cost for any textbook lost, regardless of condition. The amount charged for a damaged textbook will be determined by the principal.

Grading:

60% Summative (tests, projects, major labs, and some quizzes)

40% Formative (classwork, homework, quick-check quizzes, and some labs)

Strategies for Student Success:

- AP Biology is a college-level course; therefore, college-level effort is expected. A great deal of your success in this class depends on your discipline and self-motivation.
- You are in control of your success in this class. As with all other areas of your life (sports, drama, band, colorguard, a job, etc.), your input determines the outcome. You are expected to prepare for class each day, take responsibility for your actions, and actively participate in class discussions and labs.
- Assigned readings should be completed **before** that particular section is covered in class so that you will be prepared for class discussion and occasional quizzes.
- All lecture notes will be posted on Google Classroom prior to class. Accessing them on your chromebook is great, but I actually recommend that you still take notes (or even print the presentations off before class and use them as a guide for your notes during lectures). I give out a LOT of helpful info that is not always included in the presentation. Also, writing things down *by hand* has been scientifically proven to increase the likelihood that you will remember them.
- You should spend a significant amount of time every night reviewing notes from class and preparing for future lectures.
- It is strongly recommended that you communicate directly with your teacher regarding questions. The best way to do this is by emailing me at jessica.crowley@carrollcountyschools.com I will make every effort to return your email within 24 hours during the work week.

Classroom Policies and Procedures

1. Bring all materials to class daily (notebook, writing utensils, calculator, etc.). All other personal belongings must be stored under or beside your desk.

2. Act in a way that promotes learning (both your own and other classmates).

3. Actively participate in class (take notes, ask questions, answer questions).

4. Appropriate laboratory behavior is expected at all times. Any unsafe or off-task behavior will result in dismissal from the lab area and a possible grade of zero.

5. Cheating of any kind on any assignment will result in a **non-negotiable** grade of zero.

6. No cell phones/earbuds are allowed to be used in the classroom unless permission is given. Cell phones should be kept in your backpack or purse. *All phones will be collected in the phone pouches during tests and quizzes*.

7. Food, drink, gum, and candy are not allowed in class during lab days. The privilege of eating and drinking in class can be removed if trash is not disposed of properly.

8. You will only be permitted to use a hall pass **3 times** per 9 weeks. *Once you have used your 3 passes you will not be permitted to leave the classroom without a medical excuse.*

9. Students will have 3 days to turn in missing assignments due to an **excused absence**. *All long-term assignments are due on the due date, even if the student is absent.*

10. Late work will receive a 10% penalty per day, for up to three days, or until the assignment has been graded and returned… whichever comes first. After this point, you will receive a zero. (Work is considered late if it is not turned in at the designated time, even if it is turned in soon thereafter).

11. No individual extra credit will be assigned. If extra credit is offered, it will be offered to the entire class.

***Noncompliance with any expectation will result in disciplinary action, as outlined in the VRHS student handbook.**

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In order to contact you concerning the progress of your child, please supply the information below, detach the bottom portion, and return to school OR scan the QR code and complete the Google form. For more prompt and frequent communication, email is preferred.

Student Name: _____Parent Name(s): _____

Parent Email:_____Parent Phone Number(s):_____

Parents of AP Biology Students,

I am looking forward to teaching your student this year. I absolutely love teaching Biology at the AP level because of the depth of the material as well as the maturity of most AP students. AP Biology is a very rigorous college-level course, and most students will struggle with it at some point. I wanted to let you know that I am aware of these struggles and the anxiety and frustration that they can cause. This class requires a great deal of self-motivation, much like college courses do. However, unlike most college classes, your student is not just a number to me. I will gladly work with them and help as much as I can when they struggle, but they must also do their part if they are to be successful.

In my years of teaching AP Biology, I have always shared tips with students, but I have noticed that many of these tips are not passed along to parents until there is a real problem. As a great deal of their reading and studying will take place at home, I wanted to make you aware of several things that I share with students that will help them to be more successful in my class:

1. **The textbook is essential. READ IT!**
   - *I assign chapters to be read BEFORE we cover that chapter in class. This is intended so that students will be familiar with the material and can ask questions in class.*
2. **All of my notes will be shared online. Use them wisely.**
   - *There is a HUGE amount of material to cover before the AP Exam in May. My slideshows are really just an outline of the important high points. I don't expect students to write down everything during lecture, but it is important to at least take some notes by hand (muscle memory helps imprint details into the brain). Before they had access to chromebooks, I always had students print out the slides as a note-taking guide... Might still be useful for some, depending on their learning style.*
3. **Get an AP Exam Review book. Now.**
   - *Exam study guides (Strive for a 5, Barrons, Princeton Review, College Board, etc.) are good for reviewing before the AP exam, but they can also be a huge help to clarify throughout the year. Websites like Albert.IO , Khan Academy, and Crash Course are great. Call me old school, but there's just something about being able to take notes in your own copy of a paper book all year...*
4. **If I provide test corrections or extra credit, take advantage of it!**
   - *Don't be lazy. It's always best to stay ahead than try to catch up at the end of the year.*
5. **Don't be afraid to ask questions.**
   - *I am typically at school for at least a few minutes every morning and afternoon for quick questions. I will also set up tutoring sessions as needed. And I can also be reached by email just about anytime. ☺*

Sincerely,

Jessica Crowley

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I am looking forward to a wonderful semester as your child's science teacher. In order to provide the best possible learning environment for your child, classroom discipline is important. I am providing you and your child with the class rules andprocedures.

I highly encourage you to regularly look at your child's grades online on the Parent Portal.

I acknowledge that I have read and understand all information contained in the AP Biology syllabus. I will make every effort to honor the rules and procedures while in this class. Sign below.

Student_____ Date_____ Parent/Guardian_____ Date_____

***Please list any known medical issues. (ex: allergies, etc.)_____**

Is there anything else I should know to help make your child more successful?