**Hopewell High School**

**2016-2017 AP Biology Syllabus**

**Teacher:** Eric Nebel **Room:** 209

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**Course name:** AP Biology 2 **Text:** Campbell Biology 9th edition

**Wiki Page Address:** <http://nebelbiology.weebly.com>

**Remind 101 phone Number:** 81010 **Message to send to enroll:** @4d8727

**Tutoring/Recovery:** Tuesdays & Thursdays from 2:30-3:15 or by appointment. May change depending on school commitments.

**Course Description:**

AP Biology 2 is a college level course designed around 4 Big Ideas and 7 Science Practices. These are listed at the end of this document. This course will culminate in the AP Exam that will earn the student college credit if a score of 3 or above is achieved.

**Course Goals:**

\*Understand and be able to apply the 4 Big Ideas of Biology

\*Show competency in the 7 required science practices

\*Achieve a 3 or higher on AP exam

**Class Participation:**

You will get the most out of AP Biology when you come to class prepared. You must be able to participate during class discussion and other activities that take place.

**Materials:**

3-ring binder Writing utensils Spiral/composition notebook for reading logs

**Optional supplies:**

Highlighters Scientific Calculator (4-function)

Graph paper Markers/colored pencils

**Note Taking:** Use your 3-ring binder for notes and handouts every day. It is wise to take detailed notes during lecture and class discussions. Include drawings, diagrams and concept maps. Reviewing and rewriting your notes on a regular basis is an excellent way to study.

**Lab Work:** There will be approximately 20 hours of labs this year that are designed to give you a better understanding of experimental biology and experimental design. Labs will be designed with an established procedure for the initial part, but will then require you to apply what you know to extend the experiment using your own ideas and strategies.

All graded lab work must be completed by the individual student with no help from other students. All final lab reports must be kept after they are graded in your 3-ring binder. You will be expected to be in class on the day the lab is assigned as they are extremely difficult to make up on your own. You will be solely responsible for setting up and cleaning up your lab. All labs must be turned in completed to me.

**Evaluation:**

Grading scale: A: 90-100

B: 80-89

C: 70-79

D: 60-69

F: <59

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| --- | --- |
| **30% of Quarter Grade** | **70% of Quarter Grade** |
| Informal assessments must be linked to specific objectives and include a variety of assignments such as warm-ups, notebook checks, quizzes, group work, in-class tasks, class participation, etc. | Formal assessments must be linked to specific objectives and include a variety of assignments such as tests, comprehensive writing assignments, projects, etc. |

**Assignments:**

1. Homework will be given almost every night. Check the board for homework assignments daily. If you are absent, be sure to ask for missing work when you return before or after class.
2. Homework is due at the beginning of the class period. Classwork will be assigned a deadline with the assignment. Late work will receive a maximum of 65% grade for work showing a concerted effort if turned in by the beginning of the next class meeting. After this, late work showing a concerted effort will receive a 50% grade if turned in prior to the first day of the published exam schedule for each quarter. Concerted effort means that student work reflects thoughtful effort towards ALL items on classwork, homework, and/or assessments.
3. Papers that are copied will receive no credit. Do your own work!! Do not let others copy your work or you too will receive a 0.
4. Students who are absent have 5 school days to make arrangements to make up missed assignments, quizzes and tests. After 5 days all assignments, quizzes, and tests will be a 0 if not made up.

**Mastery Grading:** Every student at Hopewell High School will be given an opportunity to master course objectives through a variety of strategies provided during class and outside of class. Students’ formal grades will be broken down by specific objective. After each formal assessment, every student will be given the opportunity to improve their mastery of specific concepts and then demonstrate this improvement to improve their grade.

**Remediation/Reassessment:** Students who score a 79% or below can retest after completing the remediation. Students will receive the higher of the two grades for a maximum of 79%. It is the student’s responsibility to initiate and complete the remediation and the retest process within two weeks of the original test date or make other arrangements, which are agreed to by the teacher. The 2nd test may be in a different format, but should maintain the rigor of the initial test.

**Honor Code (PBIS):** Each student must acknowledge their understanding of the Honor Code by signing an acknowledgment form. The form can be located in the PBIS Manual.

\*Plagiarism, in any form, will not be tolerated. If any part of a student’s work can be found in any other printed form, whether it be published or on the Internet, it will result in an automatic zero on the assignment and referral to an administrator.

\*Cheating is defined as students using someone else’s work to complete his/her own.

**Expectations:**

1. Students will come to class prepared to learn each day just as the teacher will be prepared to teach each day.
2. Students will follow all school rules and CMS rules according to the Students Rights and Responsibilities handbook. This includes dress code.
3. Discussion is encouraged during group activities and other activities where students have time available, but not during lectures, note taking, when instructions are being given, and when someone else is talking (peer or instructor).
4. No swearing, hitting, kicking, or any other physical contact with the instructor or other students and/or visitors to the classroom.
5. Be in your assigned seat when the final bell rings. Once you report to class do not stand outside the door.
6. A student must obtain permission before leaving the room for any reason. If you are gone longer than 10 minutes this is considered truancy and could result in a referral. No students will be allowed to leave the class during the first or last 15 minutes of the period.
7. Lab safety will always be maintained. Any student who violates lab safety rules will be removed from the lab and given an alternate assignment to complete. Please wait for permission before touching any lab supplies, etc.
8. Cell phones and other personal technology devices are not permitted to be out and/or in use during class time. This is a school wide policy that is designed to maximize your educational achievement. If the cell phone is out for any reason the following procedures are in place:   
     
   First offense: The device will be confiscated and secured in the office. A written warning will be issued to the student. A parent or legal guardian may pick it up during after school hours between 2:30 and 3:30 pm or 6:30-7:15 am. If a student refuses to surrender the device, 1 day of ISS (In School Suspension) will be issued.

Second offense: The device will be confiscated and secured in the office. The student will receive a full day of ISS. If a student refuses to surrender their phone, they will be given 2 days OSS (Out of School Suspension). A parent or legal guardian may pick it up during after school hours between 2:30 and 3:30 pm or 6:30-7:15 am.

Third offense: The device will be confiscated and secured in the office. The student will receive 1-3 days of OSS. If a student refuses to surrender their phone, they will be given 3 days OSS. A parent or legal guardian will be scheduled for a conference. The parent and student will be informed that the student is not allowed to bring technology to school for the rest of the year. The technology will be returned at the conference. However, the phone may not be returned to the student until after school. Administrators may, at their discretion, create a behavior contract giving the student the chance to earn back the right bring technology to school.

Future offenses will be considered insubordination and consequences assigned accordingly.

1. The classroom computers and Chromebooks are only to be used with permission.

Failure to follow these rules will result in consequences based on the school discipline plan. Minor issues will result in a consequence and minor SIR. These are tracked from all your classes. If I am writing a minor SIR for you, and you already have 2-3, the minor SIR will become a major SIR due to violations across the school and be referred to your administrator. A major violation such as Truancy (skipping class or being more than 5 minutes late for class), fighting, honor code violations, etc, will automatically be a major SIR and be sent to your administrator.

**Attendance:** Students will adhere to the school tardy policy. Students are expected to be in attendance at school each day. My door will be closed by the hall monitor following the tardy bell. Students remaining in the hall after my door has been closed will be marked as tardy and need to report to student services to receive a pass. On the 5th cumulative tardy students will begin to receive punishments from administration. Students who miss 21 or more days per class for any reason will receive a grade of “F” for the semester unless the CMS recovery plan is followed. If a student reaches this point recovery is available following the schedule listed at the top of this syllabus.

**AP Test:**

The biology AP test is scheduled for Monday May 14, 2018 in the morning. More information about registering will be made available later in the school year. The test has 2 sections: multiple choice and free response. Both sections will focus on the big ideas, enduring understanding, essential knowledge and science practices. The exam is 3 hours long and contains a 90-minutes multiple choice section and a 90-minutes free-response section that begins with a mandatory 10-minute reading period. Each section will count as half of your score in the test.

Section I consists of 2 parts. Part A is 63 multiple choice questions related to knowledge and science practices. Part B includes 6 grid-in questions that integrate science and math skills. You will be allowed a simple four-function calculator (with square root) for the exam.

Section 2 you will have a mandatory reading period of 10 minutes and then 80-minutes to complete 2 long free response and 6 short free-response. Partial answers do earn you points.

**Laboratory Safety Rules and Guidelines:**

1. **What you don’t know might harm you or others!!** Before each lab activity students will be given instruction in proper methods of lab procedure. Attention must be paid to these instructions before beginning any activity in the lab. ALWAYS READ THE INSTRUCTIONS BEFORE BEGINNNIG THE FIRST STEP OF ANY LAB PROCEDURE.
2. **Not everyone can be the leader!** Assign roles in your lab group and stick to them for the particular assignment. If there is confusion ask members of your lab group. If you are still unsure ask me.
3. **Just because it looks harmless:**
   * A hot plate or piece of glass may be hot enough to burn after it looks cool.
   * Gasses don’t look explosive.
   * Never taste a chemical. Smell odors by wafting.
   * Do not use cracked or chipped glassware.
4. **Read Labels!**
5. **If you see someone doing anything potentially dangerous in the lab, tell them and if they don’t stop tell me.**
6. **In case of a fire: Use fire extinguisher and blanket as needed.**
7. **Safety Goggles:** State law requires that all students wear safety goggles when working with any experiment involving material that may splatter, cause an explosion, or propel objects into the air. A class set is provided in the classroom but you may bring your own if you wish. Normal glasses and sunglasses do not count as safety goggles. Additional safety equipment may be required depending on what chemicals we are using such as gloves and/or aprons. Both will be provided if needed or asked for.
8. **Love thy neighbor . . .** Take care not to bump others while working, wave sharp instruments and please stay at your assigned lab station.
9. **In case all else fails . . .** report any accidents to me immediately.
10. **I am not your mother!** . . .clean up your lab station and put away items as directed before leaving the classroom.

**Course Framework**

**Big Ideas:**

**1. The process of evolution drives the diversity and unity of life.**

Enduring Understanding 1A: Change in the genetic makeup of a population over time is evolution.

Enduring Understanding 1B: Organisms are linked by lines of descent from common ancestry.

Enduring Understanding 1C: Life continues to evolve within a changing environment.

Enduring Understanding 1D: The origin of living systems is explained by natural processes.

**2. Biological systems utilize free energy and molecular building blocks grow, to reproduce and to maintain dynamic homeostasis.**

Enduring Understanding 2A: Growth, reproduction and maintenance of the organization of living

systems require free energy and matter.

Enduring Understanding 2B: Growth, reproduction and dynamic homeostasis require that cells create

and maintain internal environments that are different from their external environments.

Enduring Understanding 2C: Organisms use feedback mechanisms to regulate growth and reproduction

and to maintain dynamic homeostasis.

Enduring Understanding 2D: Growth and dynamic homeostasis of a biological system are influenced by

changes in the system’s environment.

Enduring Understanding 2E: Many biological processes involved in growth, reproduction and dynamic

homeostasis include temporal regulation and coordination.

**3. Living systems store, retrieve, transmit and respond to information essential to life processes.**

Enduring Understanding 3A: Heritable information provides for the continuity of life.

Enduring Understanding 3B: Expression of genetic information involves cellular and molecular

mechanisms.

Enduring Understanding 3C: The processing of genetic information is imperfect and is a source of

genetic variation.

Enduring Understanding 3D: Cells communicate by generating, transmitting and receiving chemical

signals.

Enduring Understandings 3E: Transmission of information results in changes within and between

biological systems.

**4. Biological systems interact, and these systems and their interactions posses complex properties.**

Enduring Understanding 4A: Interactions within biological systems lead to complex chemical

properties.

Enduring Understanding 4B: Competition and cooperation are important aspects of biological systems.

Enduring Understanding 4C: Naturally occurring diversity among and between components within

biological systems affects interactions within the environment.

**Science Practices:**

1. The student can use representations and models to communicate scientific phenomena and solve scientific problems.

2. The student can use mathematics appropriately.

3. The student can engage in scientific questioning to extend thinking or to guide investigations within the context of the AP course.

4. The student can plan and implement data collection strategies appropriate to a particular scientific question.

5. The student can perform data analysis and evaluation of evidence.

6. The student can work with scientific explanation and theories.

7. The student is able to connect and relate knowledge across various scales, concepts and representations in and across domains.

**Syllabus Contract**

**Read, Sign, and Return**

I \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ have read and understand the expectations that have been put on me in AP biology.

Student Signature:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Parent Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_