ADVANCED PLACEMENT BIOLOGY is designed to develop an appreciation for the study of life and allow students to identify and understand unifying principles within the diverse biological world. What we know today about biology is a result of generations of inquiry. With this in mind, the process of inquiry and developing critical thinking skills is an important part of this course.

AP Biology is designed to be the equivalent of a college introductory biology course taken by biology majors during their first year. The course is built around four “big ideas,” along with a series of enduring understandings and science practices. The big ideas are:

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

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

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

**Big idea 4:** Biological systems interact, and these systems and their interactions possess complex properties

**TOPIC OUTLINE:** Detailed information about the enduring understandings, essential knowledge, and the AP examination can be found online at [https://apstudent.collegeboard.org/apcourse/ap-biology/course-details](https://apstudent.collegeboard.org/apcourse/ap-biology/course-details).


**CLASS MATERIALS:**
- 3-subject spiral notebook *exclusively* for AP Biology *(required)*
- 3-ring binder *(optional)*
  - *Note:* many students use separate binders for 1st and 2nd semesters.

**TESTS:** This course is designed to prepare students for the national AP Biology exam on Monday May 9, 2016. Therefore, the tests used in this course will attempt to reflect the style and difficulty level of the actual AP Biology exam. Because of the difficulty of the course, students may not always obtain high percentages tests. Diligence with lab and homework should offset lower test grades.

**GENERAL RULES:**
1. Follow all Royal Oak HS guidelines regarding attendance and conduct.
2. Show respect for everyone and everything in the classroom.
3. Listen whenever anyone speaks. Disrespectful behavior will not be tolerated.
4. Do not make excuses. Come to class prepared, on time, and ready to work everyday.
5. Work that you turn in should be your own. Although you may work with a group on certain assignments, the work you submit should be unique.
6. No food or drink (other than water) is allowed in the classroom.
7. Inappropriate language or topics of conversation will not be tolerated.

**WORK:**
1. Homework is regularly assigned. It is designed to provide background for lectures and labs, as well as practice on skills learned in class. *(See semester calendar and MiStar for detailed assignment information.)*
2. Students should save all returned papers and organize them in their binders.
3. Students are responsible for gathering work or scheduling a time for lab or test make-ups when they are absent.
EVALUATION:
Marking period grades are based on total points earned in each of the categories listed below. Grades will be updated as often as possible. It is the student’s responsibility to monitor grade details online and report any errors. Progress reports are always available upon request.

All assignments are to be turned in on time. Assignments turned in after the due date will face a 20% grade reduction. Assignments turned in one week past the due date will be graded but no credit will be given. After an assignment is more than a week past due, a zero in the electronic gradebook will indicate that the assignment was not turned in.

Grades are based on the following:

<table>
<thead>
<tr>
<th>Category</th>
<th>Weight</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNIT TESTS</td>
<td>50%</td>
<td>~every 3 weeks</td>
</tr>
<tr>
<td>LABS / PROJECTS / PORTFOLIOS</td>
<td>25%</td>
<td>~every week</td>
</tr>
<tr>
<td>QUIZZES</td>
<td>10%</td>
<td>~one per week</td>
</tr>
<tr>
<td>HOMEWORK</td>
<td>10%</td>
<td>~2-3 assignments per week</td>
</tr>
<tr>
<td>PARTICIPATION*</td>
<td>5%</td>
<td>~daily/weekly</td>
</tr>
</tbody>
</table>

*A portion of the Participation grade is one hour of biological experience outside of class per marking period.

Semester grades are calculated from the two marking period grades and a comprehensive final exam.

\[ 1^{\text{st}} \text{ MP} = 40 \% \quad 2^{\text{nd}} \text{ MP} = 40 \% \quad \text{EXAM} = 20 \% \]

THE INVESTIGATIVE LABORATORY COMPONENT:
The course is also structured around inquiry in the lab and the use of the seven science practices throughout the course. Students are given the opportunity to engage in student-directed laboratory investigations throughout the course for a minimum of 25% of instructional time. Students will conduct a minimum of eight inquiry-based investigations (two per big idea throughout the course). Additional labs will be conducted to deepen students’ conceptual understanding and to reinforce the application of science practices within a hands-on, discovery based environment. All levels of inquiry will be used and all seven science practice skills will be used by students on a regular basis in formal labs as well as activities outside of the lab experience. The course will provide opportunities for students to develop, record, and communicate the results of their laboratory investigations.

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

INDIVIDUAL HELP: Students may always receive help before or after school, or during C lunch.

CONTACT INFORMATION:
Phone: (248) 435-8500, ext. 1004 Email: barnettd@royaloakschools.org

NOTES:
A Google Classroom site for AP Biology is available (albeit as a work in progress). The site serves as a clearinghouse for information relating to the class, including calendars, assignments, presentations, and other resources.

SUMMER WORK will be assigned for the 2015-2016 in June, 2015. Examples of past summer assignments include reading a relevant book, field work, etc.