

Welcome to AP Biology!

This should be both a fun and challenging course. This is a college-level course and you can expect to be held to **high expectations** - just as you will be in your first year of college. This course is intended to be equivalent to courses taken freshman year by **biology majors**. (*So plan on it not coming "easy" to you.*). You can also expect this course to be very **fast paced** and **rigorous**. You may, at times, wish to spend more time on a specific topic. We have an **exceptional amount** of material to cover, and it will be in the best interest of the class to stay on schedule. If you feel you need to spend extra time to better understand specific topics, you will find me available outside of class hours for extra help.

The Goal of This Course:

The goal of this course is to prepare you to score high enough on the **AP Exam** in May to earn **college credit** in those colleges that recognize the exam. This may also allow you to take upper-level courses during your first year of college or register for courses in which biology is a prerequisite. To prepare you for this exam, we will focus our efforts on developing an **understanding of concepts** and making connections rather than simply memorizing specific details and scientific terms. We will be emphasizing science as a process rather than as an accumulation of facts

Text Book:

You will be assigned out of class **readings** and are expected to be ready to participate in in-class **discussions** based on these readings. It is imperative that you come to class prepared each and every day. Articles from scientific journals will also be assigned throughout the year emphasizing the Nature of Science as it pertains to the various topics we will be covering in class.

The textbook we have available to us in class is: **Biology, 13th Edition** By Sylvia Mader and Michael Windelspecht. This is a brand new book and aligned with the AP Curriculum, so I am very excited to be using it this year!

Other Resources:

It is also recommended that you purchase one of the many study guides (*Princeton Review, Barron's, Kaplan*). These books provide thorough review of concepts, test taking strategies, practice questions, and full length practice tests. Used (or new) study guides can be found on Amazon or Ebay - be sure the review book is written no earlier than 2014.

Grading System:

I will be using a **weighted** point system to grade each of your assignments. Every assignment you do (or don't do) will have an impact on your final grade. If you are absent, it is your responsibility to a) make sure your assignment makes it to class (*with a friend, posted in google classroom, or via email: snookkj@haslett.k12.mi.us*) and b) find out what you missed and complete the task by the assigned due date. This information can be found in Google Classroom. I will not remind you about completing make-up work. *Remember - this is a college level class and I will have college level expectations of you.*

Grade Distribution

<input type="checkbox"/> Per Marking Period 65% Chapter Assessments 25% Labs/Homework 10% Classwork/Participation	<input type="checkbox"/> Per Semester 40% 1 st Marking Period 40% 2 nd Marking Period 20% Final Exam
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Required School Supplies

You will need to have the following everyday items for AP Biology, starting with the first day back:

- 3-ring class **Binder** (2 or 2.5 in.) a folder will NOT be big enough for the amount of materials you will encounter this coming school year. (This will be your record keeper, never to be turned in or lost).
 - You should have **4-5 Tabs**: “Book Notes” (or simply “Notes”), “Class Notes” (or simply “Lectures”, “Homework”, “Labs”, and (*optional*) “Supplemental Materials”
- Spiral bound notebook (I will occasionally collect this - so it should only be used for AP Biology)
- Blue or Black pens (**I will not grade an assignment in any other colors but these**)
- Pencils and Erasers
- A small amount of graph paper
- A small pack of colored pencils - these will often be used when graphing.

Suggested Supplies

- AP Test Prep Book (This will alleviate much frustration and many tears throughout the year!) There are many good Prep Books available - like Pearson, Barron's, Princeton, Kaplan ... (The newer the better - and definitely not any older than 2013).

2020-2021 Syllabus

** I request your flexibility and patience; I will try my best to keep to this schedule, but we are in changing times this year.*

Semester 1		
Week	Date	Topic
1	8/31-9/3	Introduction Graphing Properties of Water
2	9/8-9/11 Labor Day	Organic Chem <ul style="list-style-type: none"> ● Carbon ● Carbohydrates ● Lipids ● Dehydration Synthesis and Hydrolysis
3	9/14-9/18	Organic Chem <ul style="list-style-type: none"> ● Nucleic Acids ● Proteins ● Protein Folding

“If you’re not crying, you’re not trying”

4 9/23/20	9/21-9/25 SAT - Sr	Cells and Membranes <ul style="list-style-type: none"> • Types of Cells • Organelles • Membrane Structure
5	9/28-10/2	Membrane Transport <ul style="list-style-type: none"> • Passive Transport • Osmosis • Active and Bulk Transport
6	10/5-10/8	Water Potential
7 10/12/2010/ 14/20	10/13-10/16 Columbus Day NMQST - Jr	Enzymes <ul style="list-style-type: none"> • Structure and function • Denaturation • Reaction Rates
8	10/19-10/23	Photosynthesis <ul style="list-style-type: none"> • Light Dependent • Light Independent • Factors Affecting • C4 and Cam Plants
9	10/26-10/30	Cell Respiration <ul style="list-style-type: none"> • Chemiosmosis • Glycolysis • Aerobic • Alternate Pathways
10 11/3/20	11/2-11/6 Election Day	Cell Respiration <ul style="list-style-type: none"> • Anaerobic
11	11/9-11/13	Cell Communication and Signal Transduction
12	11/16-11/20	Cell Cycle and Regulation
13 11/25-27/20	11/23-11/24 Thanksgiving	Lab - Cell Cycle and Meiosis ChiSquare Analysis
14	11/30-12/4	Meiosis
15	12/7-12/11	Genetics <ul style="list-style-type: none"> • Mendelian Genetics • Chromosomal Theory
16	12/14-12/18	Genetics <ul style="list-style-type: none"> • Nonmendelian • Environmental Effects

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12/21/20 - 1/4/21		Winter Break
17	1/4- 1/8	DNA /RNA <ul style="list-style-type: none"> • Structure • Function • Central Dogma
18	1/11-1/15	Review for Exams
19 1/18-21	1/19-1/22 MLK	EXAMS Jan 20-22
Semester 2		
20	1/25-1/29	Gene Regulation <ul style="list-style-type: none"> • Prokaryotic Operons
21	2/1-2/5	Transformation
22 2/12/21	2/8-2/11 Mid Winter Break	Gene Regulation <ul style="list-style-type: none"> • Eukaryotic
23	2/16-2/19	Biotechnology <ul style="list-style-type: none"> • Recombinant DNA • Restriction Enzymes • Electrophoresis • PCR
24	2/22-2/26	Evolution <ul style="list-style-type: none"> • Origin of Life on Earth • Natural Selection • Artificial Selection
25	3/1-3/5	Evolution <ul style="list-style-type: none"> • Evidence • Speciation
26	3/8-3/12	Evolution <ul style="list-style-type: none"> • Common Ancestry • Phylogony • Cladograms
27	3/15-3/19	Population Genetics <ul style="list-style-type: none"> • Hardy Weinberg
28	3/22-3/26	Ecosystems <ul style="list-style-type: none"> • Keystone Species • Energy Flow

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29 4/2/21	3/29-4/1 Spring Break	Population Ecology <ul style="list-style-type: none"> • Density • Growth Calculations
April 3-9/21		Spring Break
30	4/12-4/16	Community Ecology <ul style="list-style-type: none"> • Biodiversity • Disruption of the Ecosystem
31	4/19-4/23	Review Units 2-4
32	4/26-4/30	Review Units 5-6 Exam Practice
33	5/2-5/7	Review Units 7-8
34	5/10-5/14 May 14, 8:00 am	Final Review and Practice AP College Board Exam
35	5/17-5/21	Ecology Scavenger Hunt Or Survival of the Sickest
36	5/24-5/28	Final Exam
37 5/31/20	6/1-6/4 Labor Day	Independent Research
38	6/7-6/11	Rough Draft - Final Copy



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