

GREEN HOPE HIGH SCHOOL - AP Biology Summer Assignments 2017

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Key Materials and Course Resources:

Textbook: Campbell Biology, 9e available as an e-text after registration on Mastering Biology

College Board Links: [Course and Exam Description, Effective Fall 2012](#)

Lab Manual: [AP Biology Investigative Labs](#)

Online homework and study materials: <http://www.masteringbiology.com>

Required materials: binder with paper, quad-ruled lab notebook, four-function (maximum) calculator with square root

Summer assignments:

- 1) Set up Mastering Biology Account and complete the Mastering Biology Intro assignments (tutorial)
* see below for logins and instructions
- 2) Read Chapters 1-3 (e-text on Mastering Biology Site)
- 3) Complete Mastering Biology Assessments for Chapters 1- 3
- 4) Review and re-familiarize yourself with the Basic Biology and Science Concepts
- 5) Complete the Grid In Sample Math and Chemistry Problems (**Note:** watch out for sig figs)
- 6) Purchase a quad-ruled notebook and four-function calculator –**REQUIRED** the first day
- 7) Visit The College Board site and review over the overall course description and the Exam Format (P.124-169)

Note: All online assignments are due by 11:59 Sunday 8/27

Grid In Math and Chemistry sample problems at the end of this assignment are due Monday, 8/28, in class

Late penalty = 50% and only will be accepted up till the end of the first Unit

First two tests:

Ch. 1-3 → Thursday September 7th

Ch. 4+5 → Thursday September 14th

Mastering Biology Set-up Instructions: (**NOTE:** Be sure to use google chrome as your browser)

Register at <http://www.pearsonschool.com/access>

Go there and enter the first 6 letters of your code below

Click on Covered Titles, then Science, then Campbell, Biology 9e AP* Edition

Click Student Registration, then I Accept

Click No, create Login Name and Password

Enter **EMAIL MS.THOMASCH or MR. D'AGOSTIN FOR THE CODE**

Enter Account information, school zip code = 27519

Enter school information, choose a security question, etc. click

***be sure to ONLY use your wcpss email address**

Click on Log In Now [to Mastering Biology]

Click Yes, our **Course ID** is: **MBAPBIO1718**

Under Assignments, click on View All

Note: Be sure to take the time to review the instructors' settings for specific grade determination on Mastering Biology assignments

Mastering Biology Assignment Homework Honor Code Guidelines:

-You may only use the textbook and the Mastering Biology website

Note: when completing these assignments students will have two chances to get the correct answer, however, will be deducted 50% for each hint used per question. These online assignments will be due by midnight Sunday 8/28. If they are not submitted on time the late penalty will also be applied (minus 50% and will only be accepted up till the end of the first Unit)

Need Help??

Email Ms. Thomasch: jthomasch@wcpss.net or Mr. D'Agostin: jdagostin@wcpss.net

Note: both teachers are traveling over the summer so help will be "sporadic" via email during that time

Basic Biology and Science Concepts: (It is expected that students be familiar with these concepts before the first day of classes – however; this part of the assignment is not collected)

- 1) The steps and overall process of the Scientific Method
- 2) The overall process of the Engineering Design Model
- 3) Inquiry Based Science
- 4) Inductive Reasoning vs Deductive Reasoning
- 5) Hypothesis (how to formulate and how to be written)
- 6) Independent vs Dependant Variables (as part of an experiment and how to be graphed)
- 7) Controlled vs Uncontrolled Experiment
- 8) Control group vs experimental group
- 9) Quantitative vs Qualitative data
- 10) Theories vs Laws
- 11) Negative vs Positive Feedback
- 12) The Characteristics of Life
- 13) Prokaryotic vs Eukaryotic Cells
- 14) DNA (overall structure and function) and Overall Gene expression
- 15) Evolution and Natural Selection
- 16) Levels of Classifications (Domains and the 6 kingdoms)
- 17) Genomics
- 18) Cell Reproductive Methods (Binary Fission, Mitosis, and Meiosis)
- 19) Basic Genetics (Solving monohybrid crosses using punnett squares)
- 20) Organic Molecules of Life – Proteins, Lipids, Nucleic Acids, and Carbohydrates (monomers, polymers, and key functions)

Grid in Math- Chemistry Problems. Show all work and use Significant Figures.
(expect a form of each on the first test) DUE IN CLASS 8/28

- 1) **Calculate** the **molecular mass** (to 3 sig figs) of epinephrine, $C_9H_{13}NO_3$
- 2) **Describe the steps/procedure you would follow to prepare the following from a solid:** 150 mL of 0.20 M NaCl
Hint: you need to first determine the number of grams of the NaCl needed
- 3) **Describe the steps you would need to follow to prepare/dilute the following stock solution:** 2000 mL of 0.05 M ammonia starting with an 8.0 M ammonia stock solution
- 4) **Calculate** the **volume** of the specified titrant required to **neutralize** 15 ml of 0.28 M NaOH.
Titrant: 0.60 M H_2SO_4 $[2NaOH + H_2SO_4 \rightarrow 2H_2O + Na_2SO_4]$
Hint: Formula = $n_a M_b V_b = n_b M_a V_a$