

**"Science is an imaginative adventure of the mind seeking truth in a world of mystery."**

~ Sir Cyril Herman Hinshelwood (1897-1967) English chemist. Nobel prize 1956.



Summer 2017

Dear Future AP Biology Student,

You are currently registered to take AP Biology during the 2017 – 2018 academic year. Congratulations on undertaking this academic endeavor! AP Biology, designed to be the equivalent of a first-year college biology course, will be a challenging but intensely rewarding academic experience. You can potentially earn up to 8 college credits (and save thousands of dollars in the process!) by successfully completing the AP exam in May. It is **expected** that you take the exam as an integral component of this course. **This is NOT simply an honors class; this is a college-level class, and to do well, you should expect to spend at least three hours working outside of class for every one hour spent in class.**

Due to the vast amount of material that is required by the CollegeBoard, it is impossible to cover all of the material during class time. Thus, it is necessary for you to become familiar with some of the major themes we will encounter during the academic year this summer. One portion of your summer assignment will involve outside reading to give you a different viewpoint on topics that we will be discussing throughout the year; the other portion will allow you to review key concepts necessary to be successful in AP Biology and to begin to get a feel for the level of rigor that will be required in the class.

**This summer assignment has a few purposes:**

- To get you to think and to work on your writing skills during those summer months to keep your mind sharp- I will expect a lot of it in September!
- To refresh your graphing and experimental design skills since lab skills are a crucial component of the course.
- To introduce you to major concepts in AP Biology using non-classroom methods of learning

**The components of the summer assignment are organized in a table on the back of this letter!**

- You can **access all summer assignment materials** through the following link:

**<http://tinyurl.com/kyamsummerbio>**

- *Be proactive and budget your time this summer to complete Assignments 1 – 3. I DO NOT* recommend waiting until school begins again to start this assignment.

You will NOT need a textbook to complete the summer assignment but you WILL need to obtain a copy of the nonfiction work ***Survival of the Sickest*** by Dr. Sharon Moalem to complete the summer assignment (please see Assignment 3 for instructions). If you have any questions regarding what is expected and/or the specifics of the assignment please feel free to stop by Room 706 during ABC or before or after school for clarification (I am also available during 5<sup>th</sup> period). You may also email me at [ksyam@henrico.k12.va.us](mailto:ksyam@henrico.k12.va.us).

I am excited to share this journey with you! If you have any questions, feel free to stop by to talk to me during the times designated and/or email me. Please see the attached sheets for the specifics of your assignment! ☺

Sincerely,

Ms. Katy Yam  
Biology/AP Biology Teacher  
Varina High School  
[ksyam@henrico.k12.va.us](mailto:ksyam@henrico.k12.va.us)

## AP Biology Summer Assignment 2017-2018 Instructions

Assignment	Instructions	Due Date & Point Value
<b>Assignment #1 – Formal Email and Remind Set-up</b>	<p><b>1. Formal Email Instructions</b> – Draft an email to me following the instructions on the next page.</p> <p><b>2. Remind Set-up</b> – please set this up so that I can send you text message updates/ reminders over the summer and throughout the year (instructions to sign up are on the next page).</p>	<p><b>Friday, Jun. 30 - Quiz Grade</b></p>
<b>Assignment #2 – Graphing Practice &amp; Review</b>	<p>1. Complete <b>ALL</b> graphing exercises and corresponding questions given in the graphing assignment attached to this summer assignment.</p>	<p><b>Tuesday, Sept. 12 1 Quiz Grade</b></p>
<b>Assignment #3 – Summer Reading: <u>Survival of the Sickest</u></b>	<p><b>1. Obtain a copy of the book <i>Survival of the Sickest</i> by Dr. Sharon Moalem (ISBN 0060889659).</b> You can rent the book from a library but I STRONGLY recommend that you purchase your own copy of the book as we will refer to the book throughout the year. Ways to get the book:</p> <ol style="list-style-type: none"> <li><b>Ms. Yam has a limited number of copies available to borrow – first come, first served.</b></li> <li>Try amazon.com or half.com to buy the book for a decent price (anywhere from \$2.00 for a used copy to \$11 for a new copy)</li> <li>A digital copy is available in the Google Folder that I have given each of you access to for the summer assignment.</li> </ol> <p><b>2. Reading and Reflections:</b></p> <ol style="list-style-type: none"> <li><b>You MUST READ Chapters 1 -5 and then choose ONE MORE chapter to read (chapter 6, 7, or 8).</b></li> <li>Write a <b>1-page, handwritten summary</b> for EVERY chapter that you read (1 side of a sheet of lined paper) – <b>6 summaries total!</b> I expect 3-4 college-level paragraphs for each summary (minimum of 5 sentences each).</li> <li>Include an <b>important, thought-provoking quotation</b> (NOT A STATISTICAL FACT) from each chapter and <b>EXPLAIN</b> why you felt the quote was important (this is part of each summary)! <ul style="list-style-type: none"> <li>• <i>Note- Why are we doing this? Writing in science is crucial! The more you can EXPLAIN what you know, the more you will understand the concept!</i></li> </ul> </li> </ol> <p><b>3. Essay Quiz:</b></p> <ol style="list-style-type: none"> <li>You will have an <b>ESSAY QUIZ</b> on this book (to ensure that you have read it) during the <u>2<sup>nd</sup> or 3<sup>rd</sup></u> week of school. If you've read, written your summaries, and paid attention to the book, you will be fine!</li> </ol>	<p><b>Tuesday, Sept. 12 Test Grade (Reading Summaries) and Quiz Grade (Reading Quiz to be given 2<sup>nd</sup> or 3<sup>rd</sup> week of school)</b></p>
<b>Assignment #4 – AP Biology Class Supplies</b>	<p><b>1. You must have the following supplies ready the first week of school (watch for SALES in the summer- they usually start towards the end of July!):</b></p> <ol style="list-style-type: none"> <li>1.5” binder (It will get filled!)</li> <li>Dividers for the binder - labeled as follows: <ul style="list-style-type: none"> <li>• Notes</li> <li>• Homework</li> <li>• Labs/ PreLabs</li> <li>• Quizzes/ Projects</li> <li>• Test Reviews/ Free Response</li> </ul> </li> <li>Notebook paper for your binder</li> <li>Blue or Black pens AND pencils</li> <li>A couple of highlighters</li> <li>Colored Pencils (recommended for diagramming/ labeling diagrams)</li> <li>Reliable, 4-function calculator with a square root function</li> </ol>	<p><b>Monday, Sept. 11 Quiz Grade</b></p>

## Assignment #1: Formal Email and Remind Sign-up Instructions

1. **Formal Email Instructions** - We will be spending a great deal of time together and we will be utilizing digital tools to communicate frequently. Draft an email to me, following these rules:
  - a. Use an email that you check OFTEN!
  - b. Use clearly written, complete sentences. Do not abbreviate words the way you would when texting or instant messaging a friend. This is a *professional communication*, like you would communicate with a job recruiter or a college professor.
  - c. Address it to me at [ksyam@henrico.k12.va.us](mailto:ksyam@henrico.k12.va.us)
  - d. Make the **subject**: “AP Bio: Introduction to <Insert Your Name Here>”
    - You do not need to include the quotes or brackets!
  - e. Begin the email with a formal salutation such as, “Ms. Yam,” or “Dear Ms. Yam”
  - f. Introduce yourself and tell me a little bit about yourself:
    - What do you like to do outside of school (hobbies, sports, music, etc.)?
    - Do you have a job? If so, how much time does it take away from your weekly activities?
    - Tell me a little bit about your family (parents, siblings, pets, etc.)
    - Was there anything that you liked about your previous biology class?
    - What was the last book that you read for fun?
    - What are you most looking forward to in AP Biology?
    - What worries you the most about AP Biology?
  - g. End the email with a formal closing, such as “Cordially,” “Sincerely,” “Warm regards,” etc. and add your name as if you signed a letter.
  
2. **Remind Set-up:** Please follow the instructions below to join my **AP Biology 2017-2018 group** to receive text messages from me throughout the year. This way you can get reminders about your summer assignment as well as updates and reminders about class throughout the school year.
  - a. **Please send me (Ms. Yam) a message so that I know you have set up your phone for AP Biology.**

**A** If you have a smartphone, get push notifications.

On your iPhone or Android phone, open your web browser and go to the following link:

[rmd.at/mskyam](http://rmd.at/mskyam)

Follow the instructions to sign up for Remind. You'll be prompted to download the mobile app.

The image shows a smartphone screen displaying a web browser with the URL [rmd.at/mskyam](http://rmd.at/mskyam). The page title is "Join AP Biology 2017-2018". There are two input fields: "Full Name" with a sub-label "First and Last Name" and "Phone Number or Email Address" with a sub-label "(555) 555-5555".

**\*\* If you don't have a cell phone, you can sign up for email reminders using the following link:**  
[rmd.at/mskyam](http://rmd.at/mskyam)

**B** If you don't have a smartphone, get text notifications.

Text the message @mskyam to the number 81010.

If you're having trouble with 81010, try texting @mskyam to (707) 456-4516.

\* Standard text message rates apply.

The image shows a smartphone screen displaying a text message. The "To" field contains the number "81010". The "Message" field contains "@mskyam".

Name: \_\_\_\_\_ Class Period: \_\_\_\_\_ Date: \_\_\_\_\_

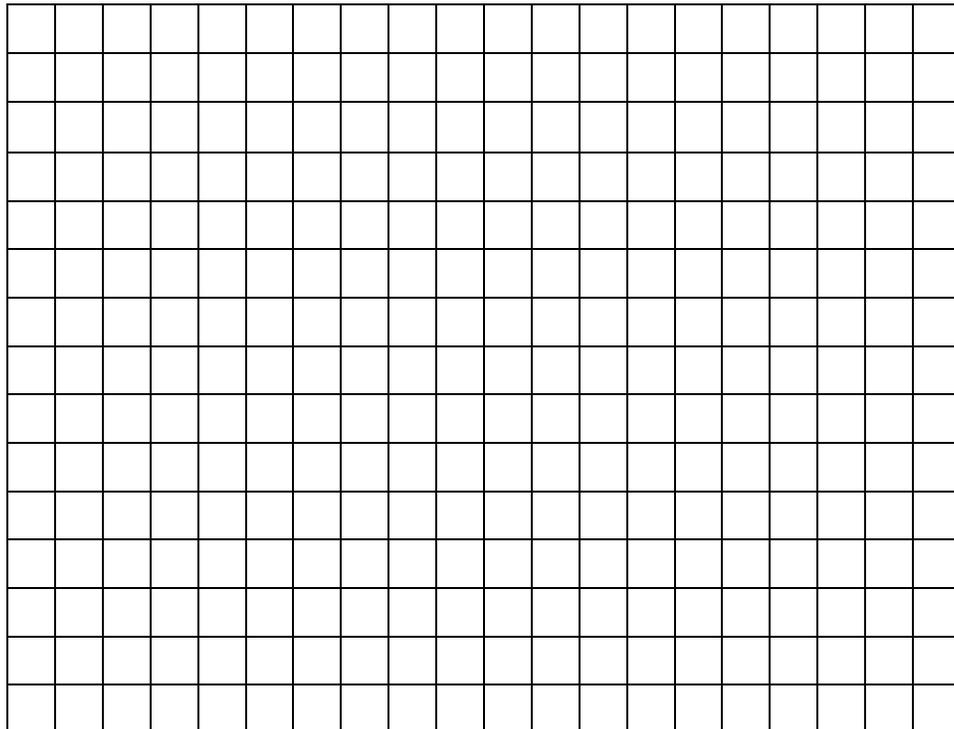
### AP Biology Summer Assignment #2: Graphing Exercise

**Instructions:** Complete the attached graphing questions. Graphs must be DRAWN BY HAND. Be sure to use all of the good graphing techniques you learned in previous Biology, Chemistry and Math classes. The graphs should be completed on the grids provided. The answers to the questions should be answered in **COMPLETE SENTENCES and HANDWRITTEN NEATLY on a separate sheet of paper**. Answers should also be well organized so that I know which question you are answering. Attach your answers to this packet.

**Graphing Scenario #1:** Hookworms live in the human intestine drinking the blood it sucks from the intestinal wall. The chart contains data on the number of hookworms and the amount of blood loss caused by a particular number of worms.

Number of hookworms in the intestine	Amount of blood lost per day in cm <sup>3</sup>
0	0
5	3
24	13
46	21
80	42
89	45
100	51

1. Make a line graph of the data using a line of best fit.
2. What is the dependent variable?
3. What is the independent variable?
4. According to your graph, if a person has 50 hookworms in their intestines, how much blood would they lose in a day?
5. How many cm<sup>3</sup> of blood will be lost by a person containing 10 hookworms in a week?



**Graphing Scenario #2:** A clam farmer has been keeping records concerning the water temperature and the number of clams developing from fertilized eggs. The data is recorded in the table.

1. Make a line graph of the data on graph paper. Connect these data points with a smooth line.
2. What is the dependent variable? What is the independent variable?
3. According to the data, what is the optimum temperature for clam development?

Water Temperature in °C	Number of developing clams
15	75
20	90
25	120
30	140
35	75
40	40
45	15
50	0

