AP Biology
First Assignment's: Due 2nd Day of Class
Mr. Elson

NoteIf you have any problems, email me at** elson.todd@westadaschools.org

1. **Assignment #1: Study Strategies Activity (see directions & questions on this handout).**
2. **Assignment #2: A Lesson in Chemistry (see attached directions & questions)**
3. **Assignment # 3: AP Biology Prefix and Suffix word list**
4. Assignment # 4: Video Learning from Bozeman Biology and Mr. Anderson.

Assignment #1: Because AP Biology (and most AP courses for that matter) are quite challenging, I have had a number of students request in the past that I provide them with a study skills resource. So, here it is. I am trying to provide you with a tool that can potentially help you *minimize* your study time and *maximize* test performance. This website is designed to help the college student be successful and since you are taking a college level biology course, the suggestions presented should be extremely relevant to you as well. You will NEVER be tested on this information. I simply feel that summertime provides a great opportunity for self-reflection. So, have fun reflecting! You can record your responses on this worksheet. **This worksheet should be printed SEPARATELY from the other three assignments!!

Visit the following website: www.studygs.net to answer the following questions:

1. Scroll down to "Guides: Project and time management". Under "Managing time and projects". Click on "Time management" and then scroll to "First: try our exercise in time management". Click on this link to take a quick survey pertaining to how you spend an average day at school. Once you complete the survey, record your responses on the table below:

Classes:	Studying:	Family Commitments:
Sleeping:	Personal Care/Grooming:	Meal Prep/Eating/Clean-up:
Exercise/Sports:	Socializing/Entertainment:	Relaxing/TV/Video Games:
Transportation:	Work/Internship:	Other:

2. Close the survey window and return to the Time Management page. Read through the 10 strategies on using time shown. As stated on the website, these applications of time management have proven to be effective as good study habits. Every year, I have at least 5 students that admit to me they don't know how to study because they've never had to! AP Biology is a college-level course. I have yet to meet anyone who has not had to study in order to be successful at the college level. These are skills that become increasingly important as you are expected to learn more complicated material. The sooner you begin practicing them, the more effective your study time becomes.

Read through each of the 10 study strategies shown and answer the questions below:

- **Blocks of study time and breaks**
  Jot down one best time block you can study. How long is it? What makes for a good break for you? Can you control the activity and return to your studies?

- **Dedicated study spaces**
  What is the best study space you can think of? What is another?

- **Weekly reviews**
  What is the best time in a week you can review?

- **Prioritize your assignments**
  What subject has always caused you problems?

- **Achieve "stage one"--get something done!**
  What is a first step you can identify for an assignment to get yourself started?

- **Postpone unnecessary activities until the work is done!**
  What is one distraction that causes you to stop studying?

- **Identify resources to help you**
  You will have FREE tutoring available for AP Biology. These are students who took AP Biology last year and are earning inside hours for National Honor Society.

  Write down three possible resources for AP Biology.

- **Use your free time wisely.**
  What is one example of applying free time to your studies?

- **Review notes and readings just before class**
  How would you make time to review?
  Is there free time you can use?

- **Review lecture notes just after class**
  How would you do this?
  Is there free time you can use?

3. Return to the Study GS Homepage. Click on the topic "Learning to Learn" located under the subheading "Learning", located toward the top of the homepage. Your path for most effective learning is through knowing:
   -
   -
   -
   -

   **Which of these elements poses the greatest challenge to you at the moment?

4. Next, click on "Effective Study Habits" located on the homepage under the subheading "Studying". Take the Study Skills survey and record your overall score: _____. Will this score influence your study habits for next year? Explain.

5. Once you have completed the Study Habits survey, scroll down to the bottom of the same page. List the 8 suggested study habits of a successful student.

6. Go back to the "Studying" section on the homepage and click on the acronym A.S.P.I.R.E. What does A.S.P.I.R.E. stand for? **PRINT THIS PAGE.** Some browsers (such as Google Chrome) will allow you to copy the ASPIRE text. Then, you can open a Word document and just paste it in. Otherwise, when you print directly from the website, there will be two pages. It doesn't matter if you end up with one or two pages, however, the ASPIRE text will be an individual assignment in your binder that needs to be separate from this document.

7. What is the major study tool recommended with the Index study system (located just under the ASPIRE subheading on the Homepage)? Do you already use a similar strategy as the one described in this section? Explain.

8. Find the "Classroom Learning" subheading on the Homepage. Then, click on the subheading "Class prep/paying attention". Summarize each of the 6 bulleted suggestions below:

9. Return to the Homepage and click on "Preparing for the Classroom" located under "Classroom Learning". There you will find suggestions for what you should be doing "Before Class" and what you should be doing "In Class". Describe two strategies you could implement in the coming year "before class" that you think would be beneficial to you. Also, describe two strategies you could use while you are "in class".

10. Go back to the Homepage. Find the Folder labeled, "Memorizing/testing". In AP Biology, you will be required, at times, to memorize an immense amount of information. Although I will be teaching you strategies to use with specific topics throughout the year, you can also use these techniques on your own if you are struggling with material. Scroll down and list the 8 strategies that are listed under the section labeled "Memorizing":

*	*
*	*
*	*
*	*

11. For two of the strategies you listed above, describe how you might use the strategy for the upcoming school year.

At this point, you have completed the Study Strategies assignment. Feel free to continue utilizing the SGS website, however. You probably noticed that there are many, many useful resources here ☺

Assignment #2: A Lesson In Chemistry

1. Go to our online textbook website: http://www.pearsonmylabandmastering.com/northamerica/masteringbiology/
2. Click on the green "Sign In" icon (Do not registar)
3. Our username is: elson.todd password: CHSBiology1
4. Click on "launch e-text" . In step 6 you will click on "Explore the student study area" from the Welcome to MasteringBiology page.
5. On left side box click on "Unit One: The Chemistry of Life". Read Ch. 2 and define the terms under Ch. 2 terms.
6. Next, Go back to the "Welcome to MasteringBiology" page and click on "Explore the student study area"
7. In top left box enter "Chapter 2: The Chemical Context of Life" then "Go"
8. Under Chapter Review near the bottom click on and take "Practice Test". After taking test click on "Submit Answers for Grading" and print this page for use later. It will be included in Unit 1 binder.

Chapter 2 Terms:

Matter:

Element:

Compound:

Trace Elements:

Isotopes:

Atom:

Protons:

Neutrons:

Electrons:

Atomic Nucleus:

Atomic Number:

Mass Number:

Atomic Mass:

Molecule:

Ionic Bond:

Covalent Bond:

Electronegativity:

Hydrogen Bond:

Polar Covalent Bond:

Non Polar Covalent Bond:

Valence:

Structural Formula (w/ Example):

Molecular Formula (w/ Example):

Ion:

Cation:

Anion:

Assignment # 3: AP Biology Prefix and Suffix Word List.

Directions: You may want to make flashcards to study and learn the following list. Learning these terms will help you! We will have a 50 term thus 50 point quiz on these terms sometime during the first or second week of school. Be ready for it on the first day of school if possible. Learn the terms in both directions. In other words, the quiz may give you the meaning and you fill in the prefix/suffix or visa versa.

Using Root words to define unknown words

Once you have completed the above root word table, use it to develop a SIMPLE definition, **in your own words,** for each of the following terms:

1. Hydrology _____
2. Cytolysis _____
3. Protozoa _____
4. Epidermis _____
5. Spermatogenesis _____
6. exoskeleton _____
7. Abiotic _____
8. Pathogen _____
9. pseudopod _____
10. Hemophilia _____
11. Endocytosis _____
12. herbicide _____
13. Anaerobic _____
14. Bilateral _____
15. autotroph _____
16. Monosaccharide _____
17. Arthropod _____
18. Polymorphic _____
19. Hypothermia _____
20. Biogenesis _____

Assignment 4: Video learning from Bozeman Biology and Mr. Anderson.

You will learn about 3 key practices to succeed in AP biology by watching a video and answering questions about each. We will be using a lot of videos for Bozeman science this year so this will give you a good introduction to the Host Mr. Anderson and the videos. Each video is about 10 minutes but allow yourself 30 minutes each to pause video and answer questions

Each video centers on the **4 Big Ideas of AP biology:**

Big Idea 1: EVOLUTION
The process of evolution drives the diversity and unity of life.

Big Idea 2: Cellular Processes: ENERGY and Communication
Biological systems utilize free energy and molecular building blocks to grow, to reproduce, and to maintain dynamic homeostasis.

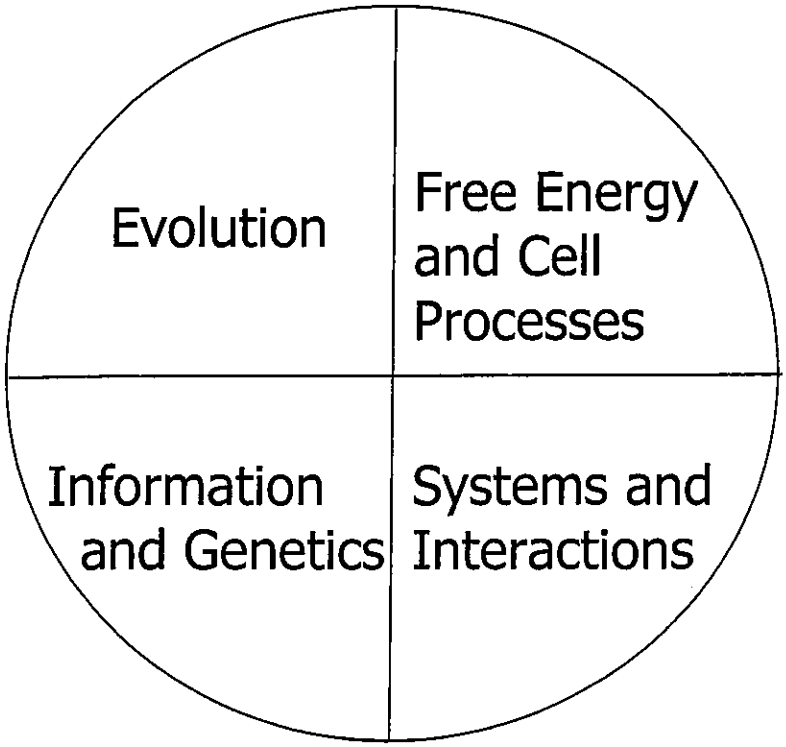
Big Idea 3: Genetics and INFORMATION Transfer
Living systems store, retrieve, transmit, and respond to information essential to life processes.

Big Idea 4: Interactions of SYSTEMS
Biological systems interact, and these systems and their interactions possess complex properties.

The 3 videos are as follows: Each work sheet has a specific link, but you can access them all if you google: < Bozeman AP biology> and choose first link. They will all be listed

1) Video 1 – Using Models
2) Video 2 – Using Mathematics
3) Video 3 – Scientific Questioning

Note. There are 7 Intro AP practice videos by Bozeman science, You can do more for extra knowledge and fun!



AP Biology Practice 1 – Models and Representations Video Review

Video - www.bozemanscience.com/apb-practice-1-models-representations

A) What is a model?.....A visual representation of _____

B) A _____ of how it works is a "Conceptual Model".

C) What are the **four Big Ideas** we will be discussing in AP Biology? List below along with associated example:

1) _____ - example shows natural _____

2) _____ - example:

3) _____ - genetics and cell

4) _____ - pyramid of

D) What are the **5 things** you will need to be able to do using models and visual representations? List below and then answer [Please keep in mind, some of the examples that he uses may be unknown to you at this time, focus on the "practice" not the content.]

1) _____

i. Relating to beetles, draw/label the final graph he created below:

ii. Why do you think there were fewer light colored beetles when the trees became darker?

iii.

2) _____ What was is going to move in his example? _____

3) _____ They will give you a model and then _____ based on that. ...

4) _____ Means that you are _____ your knowledge to a visual representation

5) _____ Asking you to _____ the knowledge that you have.

E) Models allow us to make _____ of a _____ model.

F) What is the most famous model of all? _____ That was created by _____

AP Biology Practice 2 – Using Mathematics Video Review Sheet

www.bozemanscience.com/apb-practice-2-using-mathematics

A) All sciences have what at their core? _____

B) What is "Mathematical Biology" driven by:

1) _____: sequencing DNA – what is the trend? _____

2) _____ Theory: being used to predict _____ Rule of _____

3) Computing _____: computers are getting

4) Laboratory experiments in silico:

a) In vitro: _____

b) In vivo: _____

c) In silico: simulating _____

C) **Four equations in the four big ideas**: You want to be familiar with these

1) Evolution:

3) Free energy:

2) Information:

4) Systems:

D) Understandings in Using Mathematics:

1) _____ the _____ of a Mathematical Routine: Pause video, try and do it and then check it. If you can no do, just take notes (CALCULATOR REQUIRED)

2) Apply _____ Routines: Again, try this problem. You can do this one based on common sense! (CALCULATOR REQUIRED)

3) _____ quantities that _____ natural phenomena.

a) Estimate which way water will go in each.

b) Potatoes: you can do this, just use graph. Potatoes have_____M Sucrose

AP Biology Practice 3 – Scientific Questioning Video Review Sheet – 10 pts

www.bozemanscience.com/apb-practice-3-scientific-questioning

1. I should be able to ask you, "How do we....
2. Students should be able to answer, "This is how....
3. What is a good example of how you ask questions all the time?
4. What is the problem with:
   a. Smallest bird question?
   b. Universe question?
   c. Genetically modified food question?
5. Why is the plant growth question more scientific?....but what is a problem with it too?
6. Why is the CO2 question a good scientific question?
7. A good question is going to lead to: (2x)
8. What are the three things you have to be able to do during the practice of "Scientific Questioning"?
9. Write out one of the three questions he "posed" concerning the phylogenetic tree. (You are just asking, not answering.)
10. When you "refine" a question, you are taking it to another _____
11. What is the third part of scientific questioning?
12. What can you then do if you are good at scientific questioning?