AP Biology Summer Work

Welcome to AP Biology! I am excited that you have decided to take this challenging, intriguing course! I am sure that you will learn a great deal in the course and even learn to think about science and the scientific process in a new way. This course is no doubt difficult, but I am sure that you will find it rewarding as well. Below you will find information about your assignments for the summer. ***You need a textbook to complete these assignments. Please see me in room 310 on cleaning day to check out a textbook.*** You also will need a 3 ring binder for keeping class materials (1.5" will work). You may organize this chronologically or by topic (notes, tests/quizzes, labs, homework assignments), but it must have a clear method of organization. Pick this up over the summer so that you summer work stays organized and is ready to go the first day of school.

Over the summer, I expect that you will complete the following tasks:

The Green Thumb Award

For this part of the assignment you need to start immediately. You must grow a plant from a seed and take care of it throughout the summer. The purpose of this task is to practice skills that will make you successful in AP Biology next year: observation, data collection, drawing conclusions based on evidence, and data analysis.

Details:

The type of plant is entirely up to you (it just has to start from a seed). You must document its growth by making observations, both qualitative (descriptive data about quality) and quantitative (data about quantity that can be measured numerically). You must include a picture of your plant 1 time per week, at minimum. You must take field notes with each picture. Your field notes should include:

- Common and scientific name of the plant
- Information on your seed of choice
    - Range of natural habitat
    - Nutrition/soil requirements
    - Sunlight requirements
- Growing plan
    - Type of soil used
    - Size of container (you can repot if necessary, just document these changes)
    - Amount of sun and water needed to germinate and grow
- Photo (color, please)
- Qualitative Data

    - Observations on your plant using words: color of leaves, overall plant health, etc.
- Quantitative Data
    - Measurements: height, width of stem, number of leaves, length of leaves, number of flowers/fruit (if any), measurements of flowers/fruit

You must hand write your field notes. If your plant dies, you should document that, retain all field notes and photos for the first plant, and begin again. You will bring your plant to school during the first full week (a specific date will be announced) and we will vote on the "Best in Show" award. The winning plant's caretaker will win a prize.

What to submit:

A hard copy of your work (including pictures) on the first day of class.

Summer Reading

This summer, you will read and study the ecology unit in your textbook. *Please see me in room 310 on cleaning day so that I can assign you a text.* You will read Unit 7: Ecology (chapters 40-43) and take notes for each chapter (see below).

Your goal is to achieve a firm understanding of the concepts presented in the text rather than just memorizing facts. To reach this goal, you are required to create something that will help you *learn* the material for each chapter you read. Notes on each section in each chapter are required, as they will be throughout the year. Hard copies of your notes on chapters 40-43 will be due the first day of class. You will be allowed to use your notes on a quiz over this material the first week of class, but will not have time to look up every answer, so you should study as if you will not be using your notes (think of them as a safety net).

Details:

Throughout the year, your notes will be assessed for each chapter using the rubric on the following page. Note taking is an essential skill for success in this class and for the rest of your academic and professional career. Your notes must always be handwritten on paper (writing with a stylus on your iPad and printing notes is not acceptable). The reason for this is that research on learning indicates that hand writing with pen or pencil and paper is more helpful for learning than typing or writing with a stylus.

Procedure for note taking:

1. Read the key concepts at the beginning of each chapter. The list of key concepts introduces the big ideas covered in the chapter.
2. Leaf through the chapter slowly and look up and define unknown vocabulary terms.
3. Look carefully at illustrations and their captions.
4. Read the chapter. Take notes as you read. Refer to the note taking rubric to be sure that you taking notes appropriately.
5. Optional (but a very good idea): answer the concept check questions. Check your answers in Appendix A.
6. Optional (but a very good idea): complete the Test Your Understanding questions at the end of the chapter. Check your answers in Appendix A.

Area	Description	Points earned	Points possible
Content (6 points)	Contains main idea & key concepts		4
	Contains key terms defined		2
Organization (4 points)	Clear method of organization		1
	Clear titles for all sections		1
	Clear headings & subheadings		1
	Key terms & topics stand out		1
Limitation of text (5 points)	Length is appropriate		2
	Text is in note taker's own words & handwriting		3
Overall Score:			15
Notes:			

What to submit:

A hard copy of your notes on chapters 40-43 on the first day of class.

If you have questions about this, the course, or anything else, I am happy to help! Please do not hesitate to ask questions – it is the hallmark of a scientist! ☺ I'm looking forward to working with you next year!

Ms. Proudfit