

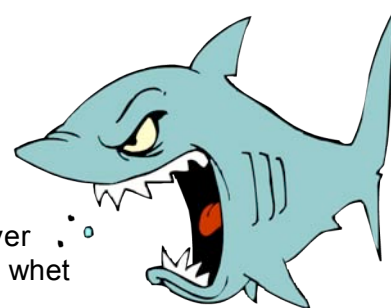
## Welcome to Ms. Foglia's "Summer of Biology" 2009

### An evolving creation!

Dun....dun...dun...dun...dun...

Is it safe to go back in the water? NO! Like a shark, there lurks the AP Biology Summer Assignment!

This summer you will delve into the world of biology like you never thought you would in those hot months! We will explore many topics to whet your appetite for the coming year of hard work.



This summer assignment has been designed for five purposes:

- to get you to think during those summer months to keep your mind sharp, because I will expect a lot out of it come September!
- to expand your vocabulary by familiarizing you with terms that we will be using in class.
- to introduce you to major concepts from AP Biology through non-classroom methods of learning.
- to have you earn some strong grades to help you begin the first quarter with confidence.
- to decrease the amount of new material that you will have to learn during the school year.

#	Due date	Assigned Task
1	Fri., June 5	1. Enter your contact information into Ms. Foglia's laptop database 2. Adopt a Plant! (or two)
2	Mon., June 29	1. Visit Ms. Foglia's Explore Biology Web site and poke around Web address: <a href="http://www.ExploreBiology.com">www.ExploreBiology.com</a> 2. Sign on to AP Biology Blog You must first receive an e-mail invitation from me to complete this Web address: <a href="http://apbio12009.blogspot.com">apbio12009.blogspot.com</a> 3. Start your Biology Scavenger Hunt (photos only!) Post at least 5 photos each week on the AP Biology Blog
3	Wed., July 1	1. Send your e-mail "Letter of Introduction" to Ms. Foglia e-mail: <a href="mailto:kim@ExploreBiology.com">kim@ExploreBiology.com</a> (See attached instructions) 2. Start reading <i>The Hot Zone</i>
4	throughout summer	1. Continue your Biology Scavenger Hunt (photos only!) Post at least 5 photos each week on the AP Biology Blog
5	throughout summer	1. Respond to Ms. Foglia's questions about <i>The Hot Zone</i> on the AP Biology Blog 2. Post your own questions and comments about <i>The Hot Zone</i> on the AP Biology Blog
6	throughout summer	1. Check your e-mail regularly for messages from Ms. Foglia
7	Wed., Sept 9	1. Buy & bring to school class supplies 2. Adopt a Plant Show-and-Tell & Contest

## ASSIGNMENT #1

### ADOPT A PLANT

Meet your new responsibilities:

**Coleus:**



**Begonia:**



#### My Objective:

To get you to experience that plants are living, breathing, growing, responsive creatures.

#### Your Goal:

To nurture your plants successfully throughout the summer. Get them to grow, get them to branch, grow them big and bushy! Specifically...

- **Coleus:** A prize for the biggest, bushiest Coleus. You *don't* want this plant to bloom!
- **Begonia:** A prize for the biggest, bushiest, *blooming* Begonia. You *do* want this plant to bloom a lot!

#### Questions:

*How do I take care of a Coleus or Begonia? How do I transplant a Coleus or Begonia? How do I stop my Coleus from blooming? How do I get my plant to branch and get bushier? Do these plants like lots of sun or do they need some shade?*

#### Answers:

Look it up! Do some research!

#### Extra Credit:

Propagate your *Coleus* and *Begonia*. Come in with a vegetatively propagated offspring from your plants.

## ASSIGNMENT #2

### LETTER OF INTRODUCTION

Welcome to AP Biology!

We are going to spend a lot of time together next year, so it's best if I get a head start on learning a bit about you. Also we will use the Internet and the Web a lot next year for this course, so let's get you used to communicating with me via e-mail.

Your first digital assignment is to successfully send me an e-mail. **Due date: Wed., July 1, 2009**

**Draft an e-mail to me following these rules:**

- a. Use clearly written, **full sentences**. Do not abbreviate words like you are on AIM with a friend. Use **spell check!** This is a professional communication like you would have with a college professor, so let's practice for your rapidly nearing future!
- b. Address it to me at: **kim@ExploreBiology.com**
- c. Make the **Subject**: "**AP Bio: Introduction to <Insert Your Name Here>**"  
(Do not include the quote marks or the brackets, just the words)
- d. Begin the e-mail with a **formal salutation**, like "Ms. Foglia," or "Dear Ms. Foglia,"
- e. Now introduce yourself (your name) and tell me a little bit about yourself, like:
  - What do you like to do (hobbies, sports, music, interests, etc.)?
  - Do you have a job?
  - Tell me a little bit about your family (Mom? Dad? Guardian? Siblings? Pets?) What do your parents do for a living?
  - Was there anything that you liked about your earlier biology class?
  - What was the last book you read for fun?
  - What are you looking forward to the most in AP Biology?
  - What are you most anxious about in AP Biology?
- f. End the e-mail with a **formal closing**: "Cordially", "Sincerely", "Warm regards", etc. and add your name as if you signed a letter.

## ASSIGNMENT #3

### SUMMER READING — FOR THE YEAR OF THE VIRUS! THE HOT ZONE: A TERRIFYING TRUE STORY

This is not textbook reading! Your summer reading is an exciting book about science.

Yes, there are people who love science so much that they spend their time researching and writing books about it and there are people who love science even more that they spend their time *reading* these science books. You too may become one of these people, Young Grasshopper!

A bit about The Hot Zone:

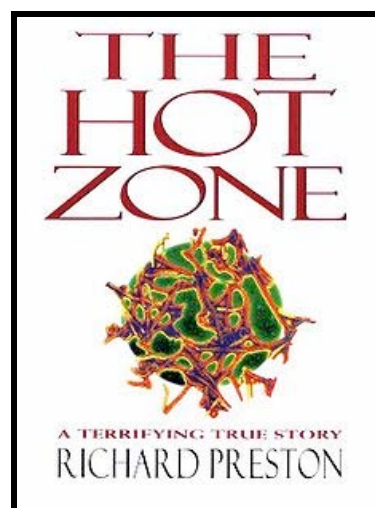
*The Ebola virus kills nine out of ten of its victims so quickly and gruesomely that even biohazard experts are terrified. It is airborne, it is extremely contagious, and in the winter of 1989, it seemed about to burn through the suburbs of Washington D.C...*

*The Hot Zone tells this dramatic story in depth, giving a hair-raising account of the appearance of rare and lethal viruses and their outbreaks in the human race. From a remote African cave hot with Ebola virus, to an airplane over Africa that is carrying a sick passenger who dissolves into a human virus bomb, to the confines of a Biosafety Level 4 military lab where scientists risk their lives studying lethal substances that could kill them quickly and horribly, The Hot Zone describes situations that a few years ago would have been taken for science fiction. As the tropical wildernesses of the world are destroyed, previously unknown viruses that have lived undetected in the rain forest for eons are entering human populations. The appearance of AIDS is part of a larger pattern, and the implications for the future of the human species are terrifying.*

This summer, we will talk about this reading via my Explore Biology Blog. It's summer... It will be a little bit loose, but I do expect you to read and respond with thoughtful ideas throughout the summer!

**SUMMER READING: THE HOT ZONE, BY RICHARD PRESTON**

**FINAL DUE DATE: MONDAY AUGUST 31**



## ASSIGNMENT #4

### BIOLOGY COLLECTION

For this part of your summer assignment, you will be familiarizing yourself with science terms that we will be using at different points throughout the year. On the next page is the list of terms.

1. **Each item is worth 2 points. You must earn 100 points by Monday August 31. I strongly suggest that you post 5 each week:**

- **Earn 100 points by “collecting” 50 items from the list of terms.**

When I say “collect”, I mean you should collect that item by finding it and taking a **photograph** (digital or paper printed) of that item. You will post your photographs with appropriate **explanations / descriptions** on the **AP Biology Blog**.

**[apbio12009.blogspot.com](http://apbio12009.blogspot.com)**

2. **YOU CAN BE CREATIVE:**

If you choose an item that is internal to a plant or animal, like the term “**phloem**”, you could submit a photograph of the whole organism or a close up of one part, and then explain on the blog *what* phloem is and specifically *where* phloem is in your specimen.

3. **ORIGINAL PHOTOS ONLY:**

You cannot use an image from any publication or the Web. You must have taken the photograph yourself. The best way to prove that is to place an item in all of your photographs that only you could have added each time, something that you might usually have on you like a pen or a coin or a key or your cell phone, etc.

4. **NATURAL ITEMS ONLY:**

All items must be from something that you have found in nature. Take a walk around your yard, neighborhood, and town. DON'T SPEND ANY MONEY! Research what the term means and in what organisms it can be found... and then go out and find an example.

5. **TEAM WORK:**

You may work with other students in the class to complete this project, but **each student must turn in his or her own project** with a unique set of terms chosen. So working with other students means brainstorming, discussing, going on collecting trips together. It doesn't mean using the same items! There are almost 100 choices... probability says there is a very slim chance that any two students will have the same items chosen for their 100 points... and I believe in the statistics!

## BIOLOGY COLLECTION TERMS

Below are the items you are to “collect”. An individual organism can only be used **once**. Humans are acceptable for **one** category only. You must take all photos yourself; no Internet photos!

### GROUPINGS

Each specimen in a category is worth 2 points up to a total of 5 specimens in the category. Except where noted every specimen must be native to New York.

1. Different biomes (only 3 must be within NY)
2. Different types of carbohydrates
3. Different classes of proteins
4. Evidence of different alleles for the same trait
5. Distinguishing characteristics between monocots & dicots
6. Organisms in different kingdoms
7. Organisms in different animal phyla
8. Organisms in different plant divisions
9. Organisms in same class but different orders
10. Organisms in same order but different family
11. Organisms in same genus but are different species
12. Organisms on different levels of the same food chain

### INDIVIDUAL ITEMS

Each specimen is worth 2 points You may have up to 2 examples of each item; submitting more than 2 will not add any additional points. These do not need to be native to New York.

1. adaptation of an animal
2. adaptation of a plant
3. altruistic behavior
4. amniotic egg
5. analogous structures
6. animal that has a segmented body
7. anther & filament of stamen
8. archaeobacteria
9. asexual reproduction
10. ATP
11. autotroph
12. auxin producing area of a plant
13. basidiomycete
14. Batesian mimicry
15. bilateral symmetry
16. biological magnification
17. C<sub>3</sub>, C<sub>4</sub> or CAM plant
18. Calvin cycle
19. cambium
20. commensalism
21. connective tissue
22. cuticle layer of a plant
23. detritivore
24. dominant vs. recessive phenotype
25. ectotherm
26. endosperm
27. endotherm
28. enzyme
29. epithelial tissue
30. ethylene
31. eubacteria
32. eukaryote
33. exoskeleton
34. fermentation
35. flower ovary
36. frond
37. gametophyte
38. genetic variation within a population
39. genetically modified organism
40. gibberellins
41. glycogen
42. gymnosperm cone – male or female
43. gymnosperm leaf
44. hermaphrodite
45. heterotroph
46. homeostasis
47. homologous structures
48. introduced species
49. Krebs cycle
50. K-strategist
51. lichen
52. lipid used for energy storage
53. littoral zone organism
54. long-day plant
55. mating behavior (*be careful!*)
56. meristem
57. modified leaf of a plant
58. modified root of a plant
59. modified stem of a plant
60. Mullerian mimicry
61. mutualism
62. mycelium
63. mycorrhizae
64. niche
65. parasitism
66. parenchyma cells
67. phloem
68. pollen
69. pollinator
70. population
71. predation
72. prokaryote
73. r-strategist
74. radial symmetry
75. redox reaction
76. rhizome
77. seed dispersal (animal, wind, water)
78. spore
79. sporophyte
80. stigma & style of carpel
81. succession
82. taxis
83. territorial behavior
84. tropism
85. unicellular organism
86. vestigial structures
87. xylem

## **ASSIGNMENT #5**

### **AP BIOLOGY SUPPLIES**

Please use the summer as your opportunity to get your supplies for AP Biology early!  
Come in prepared on Day 1.

**DUE DATE: WEDNESDAY, SEPTEMBER 9**

#### **MATERIALS**

1. 3-ring class notebook (2.5 – 3 inch) for handouts (Yes, I know that's BIG, but you will fill it more than once!)
  2. Blue or black pens and pencils to be brought to class EVERY day
  3. Textbook (will be supplied to you before summer): Biology (7th Edition) by P. Raven, G. Johnson, et al.  
The textbook should be **left at home** for your nightly homework.
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