

AP Bio Summer Extra Credit

J. Romo

Welcome to AP Biology!

Although I want you to rest, relax and enjoy your summer, it might be helpful to your success in this class if you view the world around you on your walk, camp outs, hikes or just lying in the sun, as a future biologist. Therefore, I am suggesting a couple of activities for you to complete if you would like to begin the year with a cushion of extra credit...

Yes, *extra credit*—which is pretty rare in AP Biology, so now I know you are paying attention.



ASSIGNMENT #1 LETTER OF INTRODUCTION

We are going to spend a lot of time together next year, so I would love to learn a little bit about you before the school year starts.

Your first digital assignment is to successfully send an e-mail to your AP Biology teacher.

Due Date: Monday, June 26, 2017

Draft an e-mail to me using the rules listed below:

1. Use clearly written, **full sentences**. Do not abbreviate words as if you were texting with a friend. Use spell check! Write your letter as a professional document, like you are writing a college professor.
2. Address it to the appropriate teacher:
[Romo Julie@asdk12.org](mailto:Romo_Julie@asdk12.org)
3. Make the **Subject: "AP Bio: Introduction to <Insert your Name Here> "(Do not include the quotation marks or the brackets, just the words).**
4. Begin the e-mail with a **formal salutation**, such as "Mrs. Romo or Dear Mrs. Romo"
5. Now introduce yourself (your name) and tell me a little bit about yourself.
 - a. What do you like to do (hobbies, sports, music, interests, etc.)?
 - b. Do you have a job?
 - c. Tell me a little bit about your family (Mom? Dad? Guardian? Siblings? Pets?) What do your parents do for a living?
 - d. Was there anything you like about your earlier biology class?
 - e. What was the last book you read for fun?
 - f. What are you looking forward to the most in AP Biology?
 - g. What are you most anxious about in AP Biology?
6. End the e-mail with a **formal closing**: "Cordially", "Sincerely," "Warm regards", etc. and add your name as if you signed a letter.

ASSIGNMENT #2 BIOLOGY PHOTO COLLECTION

DUE DATE: SUBMIT ON THE FIRST DAY OF CLASS TO TURNITIN.COM (The code will be given to you on the first day).

For this assignment, you will be familiarizing yourself with scientific terms that you will be using at different points throughout the year. Vocabulary is one of the pitfalls of this course, so knowing terms will help you better understand the material.

- 1. Each item is worth 2 points. You must earn 100 points by the first day of class.**
- 2. 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)** of that item. You will post your photographs with **appropriate explanations/descriptions** on a PowerPoint/Prezi format or as a scrapbook.
- 3. 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.
- 4. 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 coin or a key or your cell phone, etc.
- 5. NATURAL ITEMS ONLY:**
All items must be from something that you have found in nature. Take a walk around your yard, neighborhood, or town. **DO NOT SPEND ANY MONEY!** Research what the term means and in what organisms it can be found...and then go out and find an example.
- 6. 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. THERE ARE OVER 100 CHOICES...PROBABILITY SAYS THERE IS A VERY SLIM CHANCE THAT ANY TWO STUDENTS WILL HAVE THE SAME ITEMS CHOSEN FOR THEIR 60 POINTS...AND STATISTICS DON'T LIE!

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 the photos yourself; not internet photos.

GROUPINGS

Each specimen in a category is worth 2 points, up to a total of 3 specimens in the category (6 points total). Except where noted, every specimen must be native to Alaska.

1. Different biomes (only 3 must be within Alaska)
2. Different types of carbohydrates
3. Different classes of proteins
4. Evidence of different alleles for the same trait.
5. Distinguishing characteristics between monocots and dicots
6. Organisms in a clade

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 Alaska.

1. Active transport
2. Adaptation of an animal
3. Adaptation of a plant
4. Amphipathic
5. Anabolic
6. Anaerobic metabolism
7. Analogous structures
8. Anther and filament of stamen
9. Antibody
10. antigen
11. Archaeobacterial
12. Asexual reproduction
13. ATP
14. Autotroph
15. Auxin producing area of a plant
16. Axon
17. Batesian mimicry
18. Biological magnification
19. C3 plant
20. C4 plant
21. CAM plant
22. Calvin cycle
23. Cambium
24. Cellular respiration
25. Chloroplast
26. Concentration Gradient
27. Codominance
28. Coevolution
29. Coenzyme
30. Commensalism
31. Connective tissue
32. Denaturation

33. Detrivore
34. Diffusion
35. Diploid
36. Disaccharide
37. Dominant vs recessive phenotype
38. Ectotherm
39. Endosperm
40. Endotherm
41. Enzyme
42. Epithelial tissue
43. Ethylene
44. Eubacteria
45. Eukaryote
46. Exoskeleton
47. Fermentation
48. Flower ovary
49. Frond
50. Gametophyte
51. Genetic variation within a population
52. Genetically modified organism
53. Glycogen
54. Gymnosperm cone – male or female/leaf
55. Haploid
56. Hermaphrodite
57. Heterotroph
58. Histamine
59. Homeostasis
60. Homologous structures
61. Hydrophilic
62. Hydrophobic
63. Introduced species
64. Inflammatory Response
65. Keystone species
66. Krebs cycle
67. K-strategist
68. Lichen
69. Lipid used for energy storage
70. Littoral zone organism
71. Mullerian mimicry
72. Mutualism
73. Mycorrhizae
74. Neuron
75. Niche
76. Parasitism
77. Parenchyma cells
78. Passive transport

79. Phloem
80. Polar Molecule
81. Pollen
82. Pollinator
83. Population
84. Predation
85. Prokaryote
86. R-strategist
87. Radial symmetry
88. Redox reaction
89. Seed dispersal
90. Sex-linked
91. Spore
92. Sporophyte
93. Stigma and style of carpel
94. Substrate
95. Succession
96. Taxis
97. Tropism
98. Unicellular organism
99. Vacuole
100. Vestigial structures
101. Xylem
102. Zygote

ASSIGNMENT #3 AP BIOLOGY SUPPLIES

Please use the summer as your opportunity to get your supplies for AP Biology early!

Materials

1. 3 ring class notebook/binder for handouts.
2. Bound composition notebook –to be used as a lab notebook.
3. Blue or black pens and pencils to be brought to class **every** day.
4. Colored pencils—I will have some in class but most students enjoy having their own.
5. Highlighter – at least one color.

And the most important question...how much extra credit?

Assignment #1 – 5 points

Assignment #2 -12 points

Assignment #3 - 3 points

Total = 20 points

WOOHOO!! ☺ Enjoy your summer! I look forward to meeting you in August.