AP BIOLOGY SUMMER ASSIGNMENT 2021

Welcome to the world of Advanced Placement Biology! The attached summer assignment is required for all AP Biology students for the 2021-2022 school year.

The AP Biology course
The AP Biology course is rigorous. It is a college level course. Expect to do homework every night. You will get out what you put in to the course. You will be given the tools needed to get a 4 or 5 on the AP Biology exam by taking this course, but it will be up to you to use them and employ them.

During the year we will complete the 8 required AP labs as well as many additional labs and activities. You will gain practice in writing AP Free Response Questions, and in answering AP level multiple choice questions.

You are required to do 3 things before school starts in September:

Part 1 – Text book Chapter 1 – 20 pts
Part 2 – Biology Scavenger hunt – 50 pts
Part 3 – Root word investigation – 30 pts

By completing the assignment you will get an understanding of The AP biology course and have some basics to succeed in class.

The assignments are due the FISRT DAY of class, if not submitted earlier.
All parts of the assignment need to be uploaded to google classroom before the due date. Please double check the all parts are uploaded correctly and visible, late assignments will receive a point reduction. Note that the summer assignment will be your first grade for the class for a total of **100 pts.**

1) If you do not do the summer assignment, you will start behind in the course.
2) Don't get overwhelmed. Plan out when you will do it. Have your list of terms ready to take a quick picture when you see something.

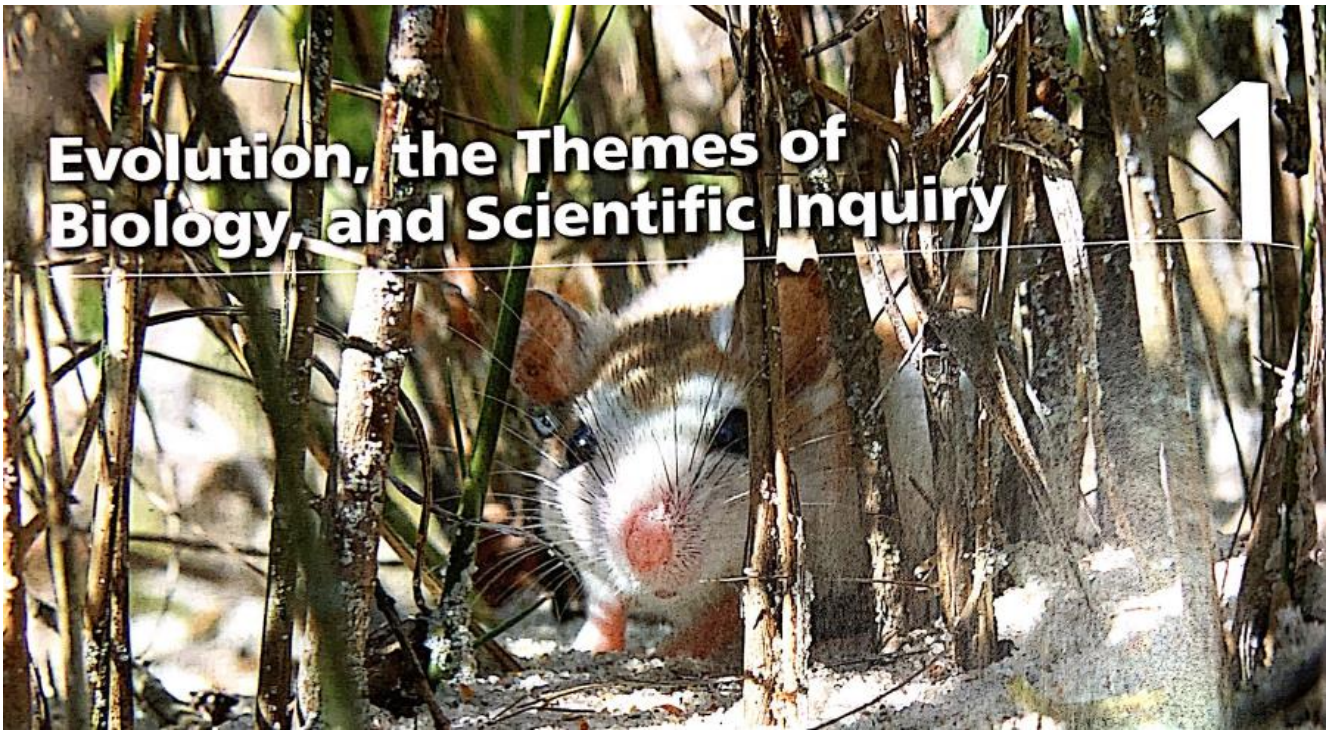
Questions?
If you have questions about this assignment or the class, you may contact me via google classroom or you can email me at **LVanSicklin@prestonhs.org** . Don't wait until the week before school to get started!

Have a great summer!

Ms. Van Sicklin

Part I: Biology Text Book – 20 points

Please read chapter 1 and answer the questions at the end of the chapter. Since you will not be receiving your textbook until the start of the school year, there is a pdf file of the textbook pages posted in google classroom. Please answer questions 1-13 on a separate document titled **Last Name_ Chapter 1**.



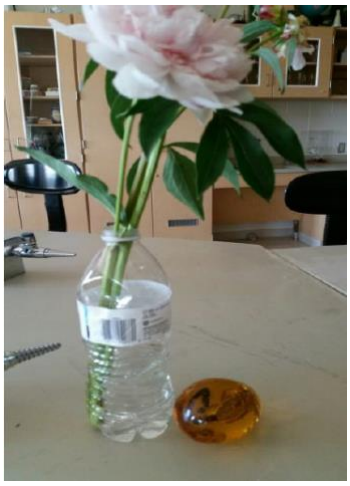
Part II: Biology Term Scavenger Hunt - 50 pts

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 and finding them in a practical situation

Select and "collect" 25 words/terms from the list (On Next Page)

When I say "collect", I mean you should collect that item by finding it and taking a **photograph.** You will make a digital "collection", along with corresponding explanations. Use google drive to create a slide show or just make a google doc with pictures pasted in along with identification and description for each. If you do not have computer access, I will accept an actual photo album to physically turn in. You can have more than one item on a page.

You do not need to find the exact item on the list, say for example, if it is an internal part to an organism, but you must apply the term to the specimen you find and explain in your finished project how this specimen represents the term.



EXAMPLE: For the word "phloem", take a picture of a flower and stem and then write a description of phloem and where it is in the flower

ORIGINAL PHOTOS ONLY:
You cannot use an image from any publication or the Web. You must have taken the photograph yourself.

NATURAL ITEMS ONLY:
Specimens may be used for only one item/word, and all must be from something that you have found in nature that is or once was alive. Ex. You cannot use your little sister's stuffed pony for a picture of a mammal. Take a walk around your yard, neighborhood, and town or even the beach. Go to a store that has living things, like home depot (plants) or PetSmart (animals) **DON'T SPEND ANY MONEY!** Research what the term means and in what organisms it can be found... and then go out and find one.

Be sure to include a description of the term and how it relates to the Photograph

Biology Scavenger Hunt list.

You must photograph at least 25 of the terms below as well as identify and describe each

Each photo and description is worth 2 pts for a total of 50 pts

1. adaptation of an animal
2. adaptation of a plant
3. abscisic acid
4. actin
5. amniotic egg
6. amylase
7. angiosperm
8. animal with segmented body
9. annelid
10. anther & filament of stamen
11. arthropod
12. archaebacteria
13. autotroph
14. auxin producing area of a plant
15. basidiomycete
16. Batesian mimicry
17. biological magnification
18. bryophyte
19. C 4 plant
20. Calvin cycle
21. carbohydrate -fibrous
22. cambium
23. cellulose
24. chitin
25. chlorophyta
26. cnidarian
27. coelomate
28. conifer leaf
29. commensalism
30. connective tissue
31. cuticle layer of a plant
32. deciduous leaf
33. deuterostome
34. dicot plant with flower & leaf
35. diploid chromosome number
36. echinoderm
37. ectotherm
38. endosperm
39. endotherm
40. enzyme
41. epithelial tissue
42. ethylene
43. eubacteria
44. eukaryote
45. exoskeleton
46. fermentation
47. flower ovary
48. frond
49. fruit – dry with seed
50. fruit – fleshy with seed
51. gametophyte
52. gastropod
53. genetically modified organism
54. gibberellins
55. glycogen
56. gymnosperm cone
57. haploid chromosome number
58. heartwood
59. hermaphrodite
60. insect
61. K-strategist
62. keratin
63. leaf – gymnosperm
64. lepidoptera
65. lichen
66. lignin
67. lipid used for energy storage
68. littoral zone organism
69. long-day plant
70. meristem
71. modified leaf of a plant
72. modified root of a plant
73. modified stem of a plant
74. monocot plant w/flower & leaf
75. muscle fiber – striated
76. mutualism
77. mycelium
78. mycorrhizae
79. myosin
80. nematode
81. niche
82. nymph stage of an insect
83. parasite
84. parenchyma cells
85. phloem
86. pine cone – female
87. platyhelminthes
88. pollen
89. pollinator
90. porifera
91. prokaryote
92. protein – fibrous
93. protein – globular
94. protostome
95. pteridophyte
96. r-strategist
97. radial symmetry
98. rhizome
99. two-chambered heart
100. spore
101. sporophyte
102. stem – herbaceous
103. stem – woody
104. stigma & style of carpel
105. tendril of a plant
106. thorn of a plant
107. unicellular organism
108. vascular plant tissue
109. xerophyte
110. xylem

Part III: Root Word Investigation – 30 points

The main reason students find it difficult to understand science is because of all the hard to write, spell and read words. Actually, scientific vocabulary is a mix of small words that are linked together to have different meanings. If you learn the meanings of the little words, you'll find scientific vocabulary much easier to understand. Find the mean to the following Greek/Latin root words.

Name	Meaning
a- / an-	
meso-	
leuco-	
aero-	
anti-	
amphi-	
aqua- / hydro-	
arthro-	
auto-	
bi- / di-	
bio-	
cephal-	
chloro-	
chromo-	
-cide	
cyto-	
derm-	
haplo-	
ecto- / exo-	
endo-	
epi-	
gastro-	
-genesis	
herba-	
hetero-	
homo-	
ov-	
kary-	
neuro-	
soma-	
saccharo-	
primi-/ archea-	
-phyll	

Name	Meaning
hemo-	
hyper-	
hypo-	
intra-	
-itis	
lateral	
-logy	
-lysis	
-meter	
mono-	
morph-	
micro-	
macro-	
multi- / poly-	
-path / -pathy	
-ped /-pod	
phago-	
-phobia	
-philia	
proto-	
photo-	
pseudo-	
-stasis	
sub-	
sym- / -syn	
-synthesis	
-taxis	
-troph	
-tropism	
-therm	
tri-	
zoo-, -zoa	
zyg- / -zygous	

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 _____
16. Monosaccharide _____
17. Arthropod _____
18. Polymorphic _____
19. Hypothermia _____
20. Biogenesis _____

You will have a **QUIZ** on these words and the above root words on the first week of class