AP Biology Summer Work: Biology Term Scavenger Hunt

For your summer assignment, you will be familiarizing yourself with science terms that we will be using at different points throughout the year.

Before you do anything:

- **Send me an email at jeakin@wcboe.org by July 31.**
  The subject line of the email should read "Incoming AP Bio Student Info"
  Please include:
  1. Your name
  2. Your parent's name(s) and emails.
  3. Graduation year
  4. Past science classes taken and your grades in each class
  5. Past AP classes taken and your grades (include any scores on AP tests)
  6. Other classes will you be taking during the school year
  7. *This class is designed to mirror content found in a science major's college biology course (as opposed to a general education bio course). Many colleges will offer 4 or 8 Biology credits for students who earn a 3 or better on the AP Biology Exam. In order to meet these expectations, you can expect a workload much heavier than what you have experienced in Honors-level Science classes*. With this in mind, what is your motivation for taking AP Biology?
  8. Do you have any concerns/curiosities about the class? What do you anticipate learning?
  9. What are your summer plans?
  10. Any other info you think I should know.

On the next page is the list of terms.

- **Select and "collect" 40 words/terms**
  When I say "collect", I mean you should collect that item by finding it and taking a **photograph** (digital or paper printed) or making a **sketch** of that item. You should create a unique way to present your "collection", along with corresponding explanations. You can do this in a number of different ways: PowerPoint, Microsoft Word, and Prezi or by creating an actual photo album. Have another idea for presenting? Just email me!
  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:** If you choose the term "phloem", you could submit a photograph you have taken of a plant leaf or a plant stem and then explain in your project what phloem is and specifically where phloem is in your specimen.

- **ORIGINAL PHOTOS/SKETCHES ONLY:**
  You cannot use an image from any publication or the Web. You must have taken the photograph (or have made the sketch) yourself. The best way to prove that is to place an item (stuffed animal, a button, toy car, etc.) in all of your photographs that only you could have added each time. You could make a small sign of your name that will be in each photo/drawing.

- **NATURAL ITEMS ONLY:**
  Specimens may be used for only one item/word, and all 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 one.

- **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.

1. adaptation of an animal
2. adaptation of a plant
3. abscisic acid
4. actin
5. amniotic egg
6. amylase
7. angiosperm
8. animal that has a 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 with 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. scale from animal with 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

Biology Prefixes and Suffixes-The Language of Science

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.

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	

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

Once you have completed the above table, use it to develop a 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 _____