

AP BIOLOGY SUMMER ASSIGNMENT 2022

Welcome to Advanced Placement Biology for 2022/2023. Attached is the summer assignment for all AP Biology students.

There are four parts to the Summer Homework:

Part 1 – Video Learning for AP Biology

Part 2 – Biology Scavenger hunt

Part 3 – Root word investigation

Part 4 - Read or listen to the “Autobiography of Charles Darwin”

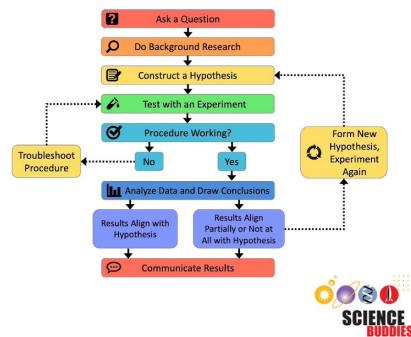
For this assignment, You will be able to use your textbook and the internet to find the answers to most of the questions...

BUT, I STRONGLY suggest that you borrow or invest in an AP Biology study guide, which will save you time, such as Cliff’s AP Biology or Princeton review. (They are even available used on Amazon). Students who regularly use a study guide on their own beyond class work greatly increase their chances of getting a 5 on the AP exam.

Part I: Video Learning for AP Biology: Please watch the following videos. Take notes on the main points of each video. Take a picture of your notes (to submit).

The Scientific Method: Steps and Examples video

Scientific Method



Reading Scientific Articles:

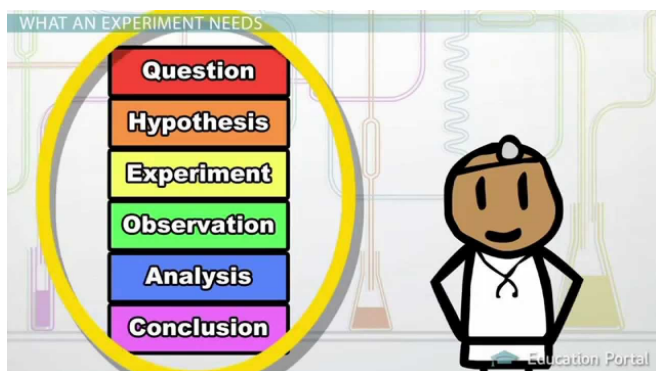
STEP THREE: READ THE RESULTS

Area	Year	Percentage of people who reported that they were happy	Percentage of people who reported that they were not happy
U.S. adults	2013	68%	32%
U.S. adults	2014	69%	31%
U.S. adults	2015	70%	30%
U.S. adults	2016	71%	29%
U.S. adults	2017	72%	28%
U.S. adults	2018	73%	27%
U.S. adults	2019	74%	26%
U.S. adults	2020	75%	25%
U.S. adults	2021	76%	24%
U.S. adults	2022	77%	23%
U.S. adults	2023	78%	22%
U.S. adults	2024	79%	21%
U.S. adults	2025	80%	20%
U.S. adults	2026	81%	19%
U.S. adults	2027	82%	18%
U.S. adults	2028	83%	17%
U.S. adults	2029	84%	16%
U.S. adults	2030	85%	15%

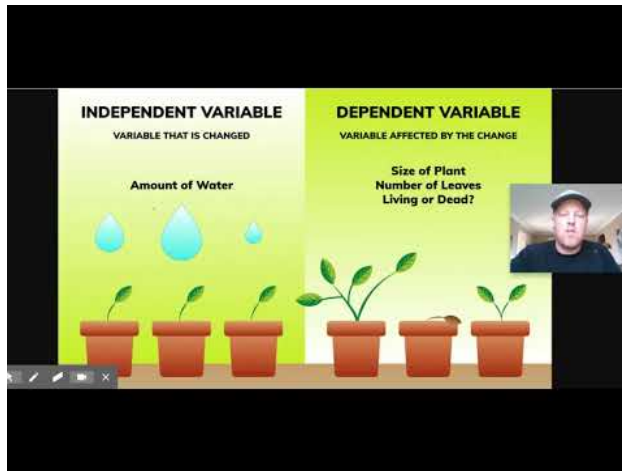
Pay close attention to charts and graphs!

- Quick summaries of the data collected

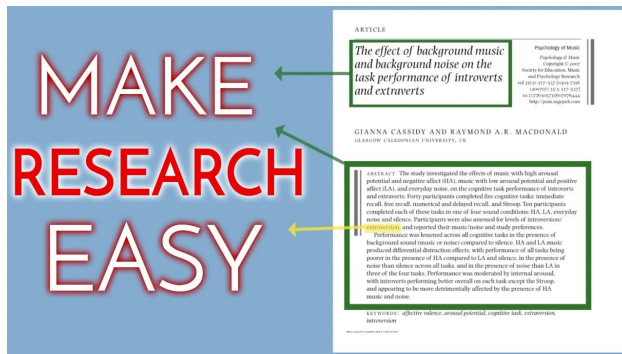
Experimental Design in Science:



Independent and Dependent Variables:



Doing Research:



Science Vocabulary: Concepts, Study Skills and word parts:



Part II: Biology Term Scavenger Hunt

Select 25 words/terms from the list below. Find a visual example of the term in nature and snap a photo using your phone OR snip a screenshot example from the internet. For each picture, you will need to have a corresponding short narrative explanation identifying and describing the term. Use these photos to create a slide show, Powerpoint, or scrapbook (to be submitted in pdf.)

Select 25 (from this list)

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

Part III: Put in a one or two word English meaning for the Latin or Greek prefixes and suffixes below. Study to understand and remember these word-parts. Snap a picture of your completed work.

Word	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	

Word	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	

Part IV:

Read or listen to the free eBook: Autobiography of Charles Darwin. Take notes on the book. Take a picture of your notes to submit.

Link to FREE ebook: The Autobiography of Charles Darwin by Charles Darwin:

<https://gutenberg.org/ebooks/2010>

Link to FREE audiobook: The Autobiography of Charles Darwin

<https://librivox.org/the-autobiography-of-charles-darwin-by-charles-darwin/>