

AP Biology Summer Assignment

Welcome to AP Biology! This class is highly intensive, with a lot of material that needs to be covered. The course is designed to cover two semesters (different classes) of college biology in one year. Please be aware that part of taking this class is commitment to being present and on time, on task and hard working. The class will only meet during the first semester so we will be working in a partially “flipped” classroom setting where you will be responsible for looking over power points and viewing videos at home to prepare for in class discussions and activities. Although it sounds like a huge commitment, **we will have a lot of fun**. I look forward to working with each one of you this coming school year.

Below you will find a couple of assignments to work on over the summer before coming back to school in the fall. I know the idea of a summer assignment is the last thing you want to think about, but I think you will find these assignments to be beneficial to you when we meet up for the start of school. Please make sure you take note of the due dates of each of the assignments as they are due at different times.

Assignment #1: Join Remind101

As stated above, we will be using a semi-flipped classroom in order to cover everything we need to in the limited class time we have. As such, I will do my best to remind you of what needs to be accomplished at home as well as when lab reports are due and when assessments are upcoming. Being a part of the remind group will allow me to text you reminders about what is going on in class. Using remind prevents me from having your phone # or you from having mine, but allows me to communicate with you through what is commonly the most efficient method. Feel free to pass the code along to your parents if they would like the updates as well. To join the remind:

Send a text message to 81010 with the message @kellapbio

If 81010 does not work, send the same message to (229) 589-8200

Assignment #2: Introduction letter – due before July 31st (before the 1st day of school)

First, I would like to know a little about who you are, so your first assignment is to send me an email – simple as that. Please send an email to kellapbio@gmail.com with your name in the subject line. Please answer the following questions in the body of your email. You may simply copy and paste the questions into your email and answer after each question if you'd like.

1. What name do you go by?
2. Why are you taking AP Biology?
3. Who was your last science teacher? What class was it?
4. What other science classes have you taken?
5. What other science classes do you plan to take after this one?
6. What do you like to do (hobbies, sports, interests, etc...)?
7. Do you have a job or plan on getting a job next year? If yes, what is your job or what kind of job do you plan to get?
8. What are your personal strengths when it comes to learning new material?
9. What causes you to struggle when learning new material?
10. What is the most effective way for you to prepare for a test?
11. How many AP classes have you taken so far?
12. How many AP exams have you taken so far? What were your scores (to your best recollection) on them?
13. How many other AP courses are you taking this year and what are they?
14. Have you taken or will you be taking anatomy and physiology or APES?
15. Was there anything you particularly struggled with in freshman biology (that you can remember)?
16. What are you most looking forward to in AP Biology?
17. What are you most anxious about in AP Biology?

Assignment #3: Root words – due Friday August 4th

Many people see learning Biology as learning another language due to the high volume of vocabulary we cover. This next assignment will help you with all of the terminology by learning the root words that make up your vocab words. Write the definition of each root word in the following table. Use any resources you have available to you.

Root	Definition	Root	Definition	Root	Definition
A-, an-		Dis-		Mort-	
Ab-		Du-, duo		Morph-	
Ac-		Ect-		Multi-	
Ad-		En-		Neo-	
-al		-en		Non-	
Alb		End-, ent-		-oid	
Allo		-eous		Pan-	
Amph-, amb-		Eu-		Permea-	
An-		Extra-		Phag-	
Ante-		Ex-		Pheno-	
Anti-		-gen, -gine		Photo-	
Aqu-		-gene, gene-		Poly-	
Archaeo-		-gony		Por-	
-ase		Herb-		Port-	
Auto-		Hetero-		Pre-	
Bene-		Homo-		Pro-	
Bi-		Hydr-		Proto-	
Bio-, bi-		Hypo-		Pseud-	
Carb-		Hyper-		Saccharo-	
Chem-		-ine		Scope	
Chlor-		Inter-		Semi-	
Chrom-, -chrome		Iso-		Strat-	
-cide		-it is		Sub-	
Co-		-less		Super-	
Con-		Lip-		Sym-, syn-	
Contra-		-logy		-taxis	
-cycle, cycli-		Macr-		Therm-	
di-		Micro-		Trans-	
Dia-		Mono-		Troph-	

Assignment #4: Biology Scavenger Hunt and Photo Album – due Friday August 11th

For this assignment, you are going to create a photo album containing 35 photographic examples of biological terms/concepts. This can either be a virtual photo album in the form of a blog, a google doc or a power point (saved to google drive and shared with kellapbio@gmail.com or a physical photo album that you bring into class. This photo album will not only introduce you to the language of biology, but it will also emphasize the importance that biology is something that's *done*, not just memorized.

To create your photo album:

1. Choose 35 terms from the list below. You are welcome to work with other members of our AP Biology class, but each person's list should be unique. With almost 100 terms to choose from, having unique photo lists should not be an issue.
2. Collect your photos by taking a picture in nature either of the term itself or something that represents that term. For example phloem is found within a plant's stem so it would be hard to take a picture of the phloem itself, but

you could take a picture of the stem and explain how it represents phloem (you cannot use this example in your album now, sorry ☺).

3. If making a physical album, print out your pictures. If making a virtual album, upload them for your presentation.
4. For each picture, you must include a definition of the term and a statement explaining how the picture represents the term or concept.
5. Use must use original photos – no photos from the internet. To ensure this happens, you need to include something of yours in **every** photo – this could be a keychain, a ring, a stuffed animal, etc... The very first picture in your album should be of you and your personal item to show that you took the pictures.
6. You are to use natural items. Take a walk in your neighborhood, go to the zoo, go to a park, hit up a nature trail, etc... Be creative in your collection – have fun obtaining your picture collection.
7. Be careful – never touch plants or animals you are not familiar with. Don't kill or harm any organisms. Don't remove any organisms from their natural environment.

This project is out of 105 points – 3 points for each entry (1 each for the photo, the definition and your explanation) – and will be your first test grade for the class.

Biology Scavenger Hunt Term/concept list – choose only 35

1. Adaptation of an animal	33. Epithelial tissue	65. Modified root of a plant
2. Adaptation of a plant	34. Ethylene	66. Modified stem of a plant
3. Altruistic behavior	35. Eubacteria	67. Mullerian mimicry
4. Amniotic egg	36. Eukaryote	68. Mutualism
5. Analogous structures	37. Exoskeleton	69. Mycelium
6. Animal with segmented body	38. Fermentation	70. Mycorrhizae
7. Anther and filament of stamen	39. Flower ovary	71. Niche
8. Archaeobacterial	40. Frond	72. Parasitism
9. Asexual behavior	41. Gametophyte	73. Parenchyma cells
10. ATP	42. Genetic variation within a population	74. Phloem
11. Autotroph	43. Genetically modified organism	75. Pollen
12. Auxin producing area of a plant	44. Gibberellins	76. Pollinator
13. Basidiomycete	45. Glycogen	77. Population
14. Batesian mimicry	46. Gymnosperm cone – male or female	78. Predation
15. Bilateral symmetry	47. Gymnosperm leaf	79. Prokaryote
16. Biological magnification	48. Hermaphrodite	80. R-strategist
17. C3 plant	49. Heterotrophy	81. Radial symmetry (animal)
18. C4 plant	50. Homeostasis	82. Redox reaction
19. CAM plant	51. Homologous structures	83. Rhizome
20. Calvin cycle	52. Hydrophilic	84. Seed dispersal (animal, wind, water, etc..)
21. Cambium	53. Hydrophobic	85. Spore
22. Cellular respiration	54. Introduced/invasive species	86. Sporophyte
23. Coevolution	55. Keystone species	87. Stigma and style of carpel
24. Commensalism	56. Krebs cycle	88. Succession
25. Connective tissue	57. K-strategist	89. Taxis
26. Cuticle layer of a plant	58. Lichen	90. Territorial behavior
27. Detrivore	59. Lipid used for energy storage	91. Tropism
28. Dominant vs recessive phenotype	60. Littoral zone organism	92. Unicellular organism
29. Ectotherm	61. Long-day plant	93. Vestigial structures
30. Endosperm	62. Mating behavior (be careful – make it appropriate!!)	94. Xylem
31. Endotherm	63. Meristem	
32. Enzyme	64. Modified leaf of a plant	