

# AP Biology Summer Assignment

Welcome to AP Biology! This course is designed to be the equivalent of a two-semester introductory biology course usually taken in the first year of college. In other words, it's a little like drinking from a fire hose. It will be a rewarding experience, but as with most things that are, it will also be challenging. Throughout the course, you will become familiar with major recurring ideas that persist throughout all topics and material.

The 4 Big Ideas of AP Biology
<b>Big Idea 1:</b> The process of evolution drives the diversity and unity of life.
<b>Big Idea 2:</b> Biological systems utilize free energy and molecular building blocks to grow, to reproduce and to maintain dynamic homeostasis.
<b>Big Idea 3:</b> Living systems store, retrieve, transmit and respond to information essential to life processes.
<b>Big Idea 4:</b> Biological systems interact, and these systems and their interactions possess complex properties.

On the pages that follow, you'll find detailed instructions of the two assignments that comprise your summer work for AP Biology. The first assignment is related to becoming acquainted the Science Practices that you'll be learning about this year in AP Biology. The second part deals with collecting pictures, examples of biological terms or concepts and creating a picture album /notebook of your collection.

**Your video notes are due on the 1<sup>st</sup> day of AP Biology and your photo blog will be due on the 2<sup>nd</sup> day. Both will be averaged together and counted as a test grade for 1<sup>st</sup> quarter. No late summer assignments will be accepted!**

Included in this packet are the following documents:

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Assignment #1 – Video Notes	
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## Assignment #1 – Video Notes – due 1<sup>st</sup> day of AP Biology

Watch the videos listed below and take hand-written notes on each of them. The note should be your original work. EACH note sheet will be scored 0 to 5 based on completeness and thoroughness as shown in the rubric below. Note pages will not be accepted late nor will they be accepted typed.

#	Video Content	Links
1	The Natural of Science	<a href="https://youtu.be/77TFIYWPxoQ">https://youtu.be/77TFIYWPxoQ</a>
2	The Scientific Method	<a href="https://youtu.be/SMGRe824kak">https://youtu.be/SMGRe824kak</a>
3	CER (Claim- Evidence-Reasoning)	<a href="https://youtu.be/5KKsLuRpsvU">https://youtu.be/5KKsLuRpsvU</a>
4	AP Biology Science Practice 1 Model and Representations	<a href="https://youtu.be/v5Nemz_cVew">https://youtu.be/v5Nemz_cVew</a>
5	AP Biology Science Practice 2 Using Mathematics Appropriately	<a href="https://youtu.be/jgqYlSKoXak">https://youtu.be/jgqYlSKoXak</a>
6	AP Biology Science Practice 3 Formulate Questions	<a href="https://youtu.be/2zB272Ak63A">https://youtu.be/2zB272Ak63A</a>
7	AP Biology Science Practice 4 Data Collection Strategies	<a href="https://youtu.be/AzTXnne40wU">https://youtu.be/AzTXnne40wU</a>
8	AP Biology Science Practice 5 Analyze Data and Evaluate Evidence	<a href="https://youtu.be/0JqukouOtZA">https://youtu.be/0JqukouOtZA</a>
9	AP Biology Science Practice 6 Scientific Explanations and Theories	<a href="https://youtu.be/3gK1xWNM7kk">https://youtu.be/3gK1xWNM7kk</a>
10	AP Biology Science Practice 7 Connecting Knowledge	<a href="https://youtu.be/7l4bcs49JP8">https://youtu.be/7l4bcs49JP8</a>

What does work that “exceeds expectations” have?

- ✓ Each video’s notes are on a different page.
- ✓ The video’s title is written as it appears in the video on the top line of the paper.
- ✓ The notes are legibly written.
- ✓ Highlighting or colors are used to emphasize key points, new vocabulary, and/or important concepts.
- ✓ Examples are documented in some way when given in the video.
- ✓ Pictures, charts, or graphs are used to display details provided in the video.
- ✓ A summary of the video content is provided at the end of the notes. Please emphasize the summary in some way (title it, star it, highlight it, etc.)

Notes are to be *original work* and are not to be copied from a peer – these serve as a log of what you have learned from the video. Copying them from a peer and not watching the video does you no good. You will receive zero credit if you are found submitting work that is too closely aligned with a classmate’s work.

**Photo Blog Table of Contents**  
 (Submit this completed form the 2<sup>nd</sup> day of class)

Name \_\_\_\_\_

Blog URL \_\_\_\_\_ URL submitted via email   
 Your photo with proof object submitted via hardcopy

Photo Order	Biological terms/concepts	Comments	Points Earned
1			
2			
3			
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## Assignment #2 - Biological Collection Photo Blog – due 2<sup>nd</sup> day of AP Biology

For this assignment, you will “collect” 25 pictures related to the words given and post them to create a note book .

1. “Collect” an item by putting a picture of it. **Define**, in your own words, the biological term/concept. Also within a couple of statements, **explain** how the picture represents the term or concept. Use the Biological Collection List on page 4 to select terms/concepts.
2. -Attach the pictures, along with the definitions, and explanation to a note book made up of poster board that you create for the class.

### Biological Collection List

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