AP Biology Summer Assignment 26/27

Due Friday August 14, 2026.

Part 1 - Introductory Letter

Part 2 - Lab Safety

Part 3 - Biology Vocabulary – Photo Scrapbook

Part 1 – Introductory Letter

Your first assignment is to successfully send me an e-mail.

Draft an e-mail to me following these rules:

- Use clearly written, full sentences. Do not abbreviate words as if you are texting a friend. Use spell check! This is a professional communication like you would have with a college professor, so let's practice for your rapidly nearing future!
- Address it to me at: gsimpson@huffmanisd.net
- Make the Subject: "AP Bio: Introduction to <your name>" (Do not include the quote marks or the brackets, just the words)
- Begin the e-mail with a formal salutation, like "Ms. Simpson," or "Dear Ms. Simpson."
- Now introduce yourself (your name) and tell me a little bit about yourself, like:
  - What do you like to do (hobbies, sports, music, interests, etc.)? Not just at JCA, but at home too.
  - Do you have a job? What would you like to do for a career? Where do you see yourself in 5 years, 10 years, 20 years?
  - Tell me a little bit about your family (Mom? Dad? Guardian? Siblings? Pets?) What do your parents do for a living?
  - Was there anything that you liked about your earlier biology class? Please be honest, do not just tell me what I want to hear.
  - Do you know where you want to go to college? What would you major in?
  - What are you looking forward to the most in AP Biology?
  - What are you most anxious or nervous about in AP Biology?
- End the e-mail with a formal closing: "Cordially", "Sincerely", "Warm regards", etc. and add your name as if you signed a letter.

Part 2 – Lab Safety

To ensure a safe and productive laboratory environment, it is crucial to follow proper safety protocols. By familiarizing yourself with lab safety guidelines, you can protect yourself and others while conducting experiments.

Fill in the Blank:

1. Always wear _____ to protect your eyes from chemical splashes.
2. In case of a fire, use the _____ to extinguish small flames.
3. Before using any equipment, make sure to read the _____ carefully.
4. If any accident occurs, report it to the _____ immediately.
5. To prevent spills, always carry chemicals in a _____

Word bank: goggles, safety manual, fire extinguisher, lab instructor, spill-proof container

Multiple Choice Questions: Choose the correct answer from the choices for each question.

1. What should you do if you spill a chemical on your skin?
    A) Ignore it
    B) Wash it off immediately
    C) Ask a classmate to help
    D) Wait for the teacher's instructions
2. Where should you dispose of broken glassware?
    A) Regular trash can
    B) Glass recycling bin
    C) Designated broken glass container
    D) Leave it on the lab bench
3. Why is it important to tie back long hair in the lab?
    A) To look more professional
    B) To avoid getting hair caught in equipment
    C) It's a fashion trend
    D) None of the above
4. What should you do if you don't understand an experiment procedure?
    A) Skip that part
    B) Ask a lab partner
    C) Proceed without understanding
    D) Ask the instructor for clarification
5. Before smelling any chemicals, what should you do?
    A) Waft the odor toward your nose
    B) Take a deep breath

C) Hold the chemical close to your face
D) Pour it into your hand and smell

Open Ended Questions: Answer the following questions in complete sentences.

1. Why is it important to wear closed-toe shoes in the laboratory?

2. What should you do if you accidentally break a glass beaker during an experiment?

3. Explain the importance of handwashing after conducting experiments in the lab.

Part 3 – Vocabulary Scavenger Hunt

Science has a language all its own. Many students struggle with biology because of the many new terms. At the end of the course, you will have a whole new language at your disposal. To help acquire this new language, you will complete two vocabulary activities.

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.

On the next page is the list of terms.

- **SELECT AND "COLLECT" 50 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 may create a digital scrapbook (i.e. Canva or Google Slides) or a hardcopy. You are the creative force. If you are not sure, just ask

You do not need to find the exact item on the list, say an internal part to an organism, but you must apply the term to the specimen you find and explain 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 made the sketch) yourself. Each photograph should contain a token that identifies it as an original photo. Kind of like the Flat Stanley pictures. You could make a small sign of your name that will be in each photo/drawing or use a toy or other token of some kind.

- **NATURAL ITEMS ONLY:**

Specimens may be used for only one item/word, and all must be from something that you have found in nature. You may not use a stuffed rabbit for a picture, but you can take a picture of the rabbit that visits every morning. 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. There can be no duplicate photos. There are 110 choices…. probability says that there is a very small chance that any two students will have a majority of the same 60 terms

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
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

37. ectotherm	92. protein – fibrous
38. endosperm	93. protein – globular
39. endotherm	94. protostome
40. enzyme	95. pteridophyte
41. epithelial tissue	96. *r*-strategist
42. ethylene	97. radial symmetry
43. eubacteria	98. rhizome
44. eukaryote	99. scale from animal with two-chambered heart
45. exoskeleton	100. spore
46. fermentation	101. sporophyte
47. flower ovary	102. stem – herbaceous
48. frond	103. stem – woody
49. fruit – dry with seed	104. stigma & style of carpel
50. fruit – fleshy with seed	105. tendril of a plant
51. gametophyte	106. thorn of a plant
52. gastropod	107. unicellular organism
53. genetically modified organism	108. vascular plant tissue
54. gibberellins	109. xerophyte
55. glycogen	110. xylem

Scale from an animal with a two chambered heart

Fish have a two chambered heart and their skin is protected by structures called scales.