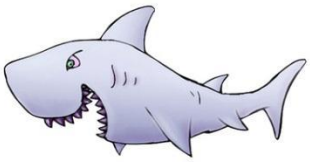
Welcome to the AP Biology

"Summer of Biology" 2022

Welcome to AP Biology for the 2022-2023 school year. AP Biology is designed to be the equivalent of a college-level introductory biology course. You will be exposed to higher-level biological principles and will be given the opportunity to apply these principles to real-life situations. As your teacher, I will serve as the facilitator while you will develop as an independent thinker and learner. Many concepts that are considered prerequisite knowledge for the course can be reviewed as home study.



Dun….dun…dun…dun…dun…

Is it safe to go back in the water? NO! Like a shark, there lurks the AP Biology Summer Assignment!

This summer you will delve into the world of biology like you never thought you would in those hot months! We will explore many topics to whet your appetite for the coming year of hard work.

This summer assignment has been designed for the following purposes:

- to get you to think during those summer months to keep your mind sharp, because we will expect a lot out of it come August!
- to expand your vocabulary by familiarizing you with terms that we will be using in class.
- to introduce you to major concepts from AP Biology through non-classroom methods of learning.

You will begin this journey over summer break by completing three assignments.

Assignment 1 is a letter of introduction.

Assignment 2 is a Biology portfolio of pictures and explanations.

Assignment 3 is reading the first two chapters of our AP Biology textbook - most of this material was presented to you in Chemistry and Biology. We will review Chapters 1 and 2 on the first day that we meet in August and test over this material ASAP. You will use our textbook website(Masterin Biology) for this and I will assign some work online as well (login instructions will be posted on google classroom)

If you have any questions, feel free to email me at jori@msdr9.org I look forward to working with you next school year – see you in August!

ASSIGNMENT #1
LETTER OF INTRODUCTION

Welcome to AP Biology!

We are going to spend a lot of time together next year, so it's best if we get a head start on learning a bit about you.

Your first digital assignment is to successfully send an e-mail to your AP Biology teacher.
Due date: July 1, 2021

Draft an e-mail to us following these rules:

a. Use clearly written, **full sentences**. Do not abbreviate words like you are texting with 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!

b. Address it to the appropriate teacher: **jori@msdr9.**org

c. Make the **Subject**: "**AP Bio: Introduction to <Insert Your Name Here>**"
(Do not include the quote marks or the brackets, just the words)

d. Begin the e-mail with a **formal salutation**, like "Mrs. Ori,"

e. 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.)?
- Do you have a job?
- 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?
- What was the last book you read for fun?
- What are you looking forward to the most in AP Biology?
- What are you most anxious about in AP Biology?

f. End the e-mail with a **formal closing**: "Cordially", "Sincerely", "Warm regards", etc. and add your name as if you signed a letter.

ASSIGNMENT #2

SUMMER PORTFOLIO

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. Over the summer you will create a portfolio of photographs and explanations by choosing **45** of the terms on the next page.

YOU CAN BE CREATIVE:
If you choose an item that is internal to a plant or animal, like the term “phloem”, you could submit a photograph of the whole organism or a close up of one part, and then explain *what* phloem is and specifically *where* phloem is in your specimen.

ORIGINAL PHOTOS ONLY:
You cannot use an image from any publication or the Web. You must have taken the photograph yourself. The best way to prove that is to **place an item in all of your photographs that only you could have added each time**, something that you might usually have on you like a pen or a coin or a key or your cell phone, etc.

NATURAL ITEMS ONLY:
All items must be from something that you have found in nature or around your home. 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 an example.

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. So working with other students means brainstorming, discussing, going on collecting trips together. It doesn’t mean using the same items! There are almost 100 choices... probability says there is a very slim chance that any two students will have the same items chosen for their 100 points… and I believe in the statistics*!*

You can submit your portfolio electronically via google classroom (jori@mehlvillschooldostrict.net), or you can print the photos and submit hard copies. (google slides are a great way to organize).

Possible Topics to be “collected” for the Summer Portfolio:

1. Adaptation of an animal	2. Adaptation of a pant
3. Analogous structures	4. Archaebacteria
5. Asexual reproduction	6. Algal bloom
7. Autotroph	8. Batesian mimicry
9. C3 plant	10. C4 plant
11. CAM plant	12. Calvin cycle
13. Cellular respiration	14, Convergent evolution
14. Commensalism	15. Cuticle layer of a plant
16. Detritovore	17. Dominant phenotype
18. Ectotherm	19. Recessive phenotype
20. Enzyme	21. Epithelial tissue
22. Ethylene	23. Eubacteria
24. Eukaryote	25. Exoskeleton
26. Fermentation	27. Genetic variation within a population
28. Gibberellins	29. Genetically modified organisms
30. Glycogen	31. endosperm
32. potential energy	33. Kinetic energy
34. Heterotroph	35. Homeostasis
36. Homologous structures	37. Hydrophilic
38. Hydrophobic	39. Introduced/invasive species
40. Keystone species	41. entropy
42. K-strategist	43. Lichen
44. steroid	45. Long-day plant
46. Mating behavior	47. Protein
48. Nucleic acid	49. Carbohydrate
50. Mullerian mimicry	51. Mutualism
52. Mycorrhizae	53. Niche
54. Parasitism	55. Polygenic trait
56. Pollinator	57. Predation
58. Prokaryote	59. R-strategist
60. Redox reaction	61. Lipid
62. Primary succession	63. Taxis
64. Secondary succession	65. Ecosystem
66. mutagen	67. Vestigial structures
68. Divergent evolution	69. Abiotic limiting factor
70. Biotic limiting factor	71. Phototropism, gravitropism, or thigmotropism