

# PRE-AP BIOLOGY SUMMER PACKET

## MARSHALL HIGH SCHOOL

### 2020-2021

Dear Pre-AP Biology Students, Parents, and Guardians:

It is required that all students take and pass Biology as part of their graduation plan. Biology is a Science course that most students take as 9<sup>th</sup> graders. They are required to pass both the class and the End of Course (EOC) STAAR Test at the end of the school year to graduate high school. We are aware that some students prefer more of an academic challenge, so they may decide to enroll in Pre-Advanced Placement (Pre-AP) Biology instead of On-Level Biology. We recommend that every student carefully consider their decision to enroll in Pre-AP Biology; however, for those who are academically capable of being successful in the course, the Biology teachers have compiled a list of entry recommendations that students and parents should consider before enrolling in Pre-AP Biology.

Entry recommendations for those signing up for Pre-AP Biology are as follows:

- Passing all 8<sup>th</sup> grade **STAAR** exams (Science, Math, Reading, and History) **\*\*This recommendation is inapplicable due to the COVID-19 pandemic; however, each student knows his or her academic strengths. The most recent 8<sup>th</sup>-grade benchmarks are a good indication of a student's ability to perform well in Pre-AP Biology.**
- Completion **AND** mastery of a summer packet over prerequisite material prior to the first day of school.
- Consistent Internet access throughout the school year for reading assignments, quizzes, and homework.

The packet is due the **FIRST DAY OF CLASS** in August. An exam over the packet objectives will take place on the first week of school. Students will receive **TWO** grades – one for the packet and one for the exam. Conferences with students may be held within the first two weeks of school to determine the best placement for student success passed on this data.

The State of Texas requires all students to pass the Biology EOC STAAR for graduation. This course is also designed to prepare students for other AP courses and for success in college.

Pre-AP Biology will meet every day and is a **VERY** fast-paced course. The assignments are more rigorous, and this class requires a **LOT** of outside class work. A reading assignment around 5 pages is assigned 2-3 times per week with a quiz over the reading pages every time the class meets. Oftentimes, there is little to no time to work on graded assignments during class. Assignments will have to be completed on the students' own time. Exams will also include open-ended essay questions, and projects will be assigned 2-3 times a semester.

Students considering Pre-AP Biology: It is **NOT** a requirement to take Pre-AP classes. If you know you cannot handle the work-load, do not take the class. You will receive a well-rounded Biology education by choosing to enroll in On-Level Biology.

We look forward to working with our students in the fall.

The Biology Teachers  
Marshall High School

Contact Skylyn Potts at [pottssm@marshallisd.com](mailto:pottssm@marshallisd.com) if you have any questions.

# **PRE-AP BIOLOGY CONTRACT**

**I understand that Pre-AP Biology requires more outside work from me. I must do my reading assignments as well as take notes over the reading because I will take a quiz every time the class meets. I need to study the material daily and on my own at home to better prepare myself for quizzes and tests. I was given a summer packet to complete and study for a test the first week of school. This course prepares me for other AP courses and, of course, it prepares me for college. I understand that all exams will have essays and projects will be assigned 2-3 times a semester. The state requires that I pass the Biology EOC STAAR test for me to graduate.**

**I am willing to do all the outside work this course requires.**

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Student signature

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Print name

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Date

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Parent signature

## SUMMER PACKET INSTRUCTIONS

### PART I – Vocabulary Terms

Make flashcards of the following terms below and write the definition (if you find multiple definitions, use the one that sounds “biological”). Study the terms for the exam the first week of school. Please note: flashcards will be checked by the teacher on the **FIRST DAY OF SCHOOL** in August.

1. Homeostasis
2. DNA
3. Somatic
4. Cytokinesis
5. Chromosomes
6. Mitosis
7. Biomolecule
8. Carbohydrate
9. Lipids
10. Proteins
11. Nucleic Acids
12. Replication
13. Lyse
14. Genotype
15. Mutations
16. Phenotype
17. Adaptation
18. Diversity
19. Xylem
20. Phloem
21. Stoma
22. Guard Cells
23. Primary Succession
24. Secondary Succession
25. Commensalism
26. Mutualism
27. Parasitism
28. Trophic Levels
29. Prokaryote
30. Eukaryote
31. Cell Differentiation
32. Genetic Code
33. Transcription
34. Translation
35. Synthesis
36. Endosymbiosis
37. Taxonomy
38. Dichotomous Key
39. Cellular Respiration
40. Photosynthesis
41. Enzymes
42. Catalyst
43. Feedback Loops
44. Limiting Factor
45. Carrying Capacity
46. Aerobic
47. ATP
48. Gamete
49. Zygote
50. Transpiration
51. Osmosis
52. Nucleotide

## PART II – Prefixes and Suffixes

All prefixes and suffixes should be studied for the exam the first week of class. You need to make FLASH CARDS over each prefix and suffix. At the beginning of school, you will have a test over these prefixes and suffixes. Flashcards will be checked the first day of school!

The following table contains a list of prefixes and suffixes. Sometime prefixes are used as suffixes and vice versa.

Prefix	Meaning	Prefix	Meaning
a-	without, negative, not	glyco-	sugar, sweet
aer-, aero-	air; oxygen	haplo-	single
anti-	against	hem-, hemo-, hemato-	blood
auto-	self	hetero-	different
bacter-, bacterio-	bacteria	homo-	same
bi-	two	hydro-	water
bio-	life	hyper-	above, excessive
calor-	heat	hypo-	under, beneath, lacking
cutis-	skin	karyo-	nucleus, nut
cyto-	cell	macro-	large
derm-	skin	meso-	middle
di-	two	micro-	small
dia-	across, through	path-	disease
diplo-	double	phago-	eating
ect-, ecto-	outer, external	photo-	light
en-, em-	in	poly-	many
end-, endo-	within	pro-, proto-	before, primary
epi-	above, upon	sacchar-	sugar
erythro-	red	sapro-	decay, rotten
en-	good, well, true	somato-	body
ex-, exo-	out of, outer	uni-	one
flagell-	whip	vas-	vessel
gam-, gamo	united, joined, sexual	zyg-	yoke, union

Suffix	Meaning	Suffix	Meaning
-ary	of or relating to	-meter	instrument to measure
-ase	enzyme	-oisis	affected with, condition
-ate	having, resembling	-otomy, -tomy	act of cutting, incision
-ation	process	-ous	characterized by, full of
-blast	embryonic layer; to	-phagia	eating, swallowing
-cide	kill	-phillic	love
-cretion	process of separating	-phobia, -phobic	fear
-cyte	cell	-phyll	leaf
-emia	blood	-plasm	material forming cells
-ferent	carry, bring	-scope	instrument for viewing
-form	shape	-sis	act, state, condition
-genic	producing, generating	-stasis	slowing; stable state
-gestion	to carry	-synthesis	combining of separate elements or substances
-ic, -tic, -ical, -ac	having to do with	-therm	heat
-logy	science of, study of	-troph	nourish
-lysis	dissolving, destruction	-trophism	turning; responding to