

PRE-AP BIOLOGY SUMMER PACKET

MARSHALL HIGH SCHOOL

2019-2020

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

The Pre-Advanced Placement (Pre-AP) program is a collaborative effort between dedicated students, teachers, and parents. Pre-AP Biology prepares students for advanced coursework in Advanced Placement and Dual Credit courses.

It is required that all students take and pass Biology as part of their graduation plan. Biology is a challenging course that most students take as 9th 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. Though On-Level Biology is challenging, we are aware that some students enjoy the extra academic challenge of enrolling in 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 8th grade **STAAR** exams (Science, Math, Reading, and History)
 - It is *highly* recommended that students scored in the **Meets** or **Masters** category on the 8th grade Science STAAR Test.
- Completion **AND** mastery of a summer packet over prerequisite material prior to the first day of school.
- It is recommended that students also have *internet* access of some type for online assignments.

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 will be held within the first two weeks of school to determine the best placement for student success passed on this data.

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 EVERY class period with a quiz over the reading pages every time the class meets. Exams will also include essay questions, and projects will be assigned every 6 weeks.

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

The Biology Teachers
Marshall High School

Contact Skylyn Potts at pottssm@marshallisd.com or Tyrone Robinson at robinsont@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 every 6 weeks. 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.

Student signature

Print name

Date

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 quiz 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 | -oasis | 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 |