

## ESP Biology Summer Assignment: 2019-2020

Welcome to ESP Biology!

Students will be introduced to the level of critical thinking and rigor required of them throughout the school year in Pre-AP Biology by starting your Biology journal, becoming familiar with Biology vocabulary and completing a lab activity. Students need to put forth effort and produce quality work. All assignments are due the first day of school.

If you have questions, you may contact us by email over the summer. I will periodically check email over the summer months.

Mrs. Ferrari: [aferrari@rivercityscience.org](mailto:aferrari@rivercityscience.org)

### **Required Materials:**

- A 1" 3-ring binder with pocket dividers, WHITE Index cards for section 3; can be lined or unlined.
- Access to Internet

### **Notebook Requirements:**

1. **Task One:** Cover Page (page 1) - Students will need to design a cover page to their journal that includes their name & the student's interests. The cover page needs to be colorful and include pictures. Pictures can be hand drawn, photos or magazine clippings.
2. **Task Two:** Questionnaire (page 2) - Students will introduce themselves by completing the questionnaire provided. Student answers should be in the form of complete sentences.
3. **Task Three:** Vocabulary- Latin Roots (page 3) - Most of the vocabulary in biology is based in Latin. Common prefixes and suffixes are listed in section two. Please paste this list into your notebook on the pages after section one.
4. **Task Four:** Vocabulary- Flash Cards- Students will create vocabulary flash cards for 30 vocabulary words of their choice. Flash cards will be turned in, in a small Ziploc bag with your name on it. Please place them in the first pocket divider of your notebook.
5. **Task Five:** CK-12.org Progressive Practice- Students will create a free account with CK-12.org. Please consider using your RCSA email and password to log into this account. Once you have access, you will need to add yourself to our ESP Biology 18-19 group using the code provided.

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### Grading

Each task will be graded out of the following point values:

Task One: Cover Page: 25

Task Two: Questionnaire: 50

Task Three: Vocabulary-Latin Roots: 25\*

Task Four: Vocabulary- Flash Cards: 150

Task Five: Summer Lab Activity: 100

\*\* All five tasks will count as a single assessment grade\*\*

### **Task One: Cover Page**

**Instructions:** On the first lined page of your notebook (page 1), create a notebook cover page for the 18-19 school year. Be sure to make it a reflection of you, your interests (both academic and extracurricular) and your goals. Include your name somewhere on your cover page. Total Points: 25 points (based on effort/quality of cover page)

### **Task Two: Questionnaire**

**Instructions:** Please complete this task on page 2 of your notebook. You will need to write the question and the answer to earn full points for this section. Total Points: 50 points. (2 points Question, 3 points Answer)

1. What is your full name?
2. Where were you born?
3. What are your strengths and your weaknesses in school? How do you overcome your weaknesses?
4. What are you most and least favorite subjects in school? Why?
5. What are your interests outside of school?
6. What is one thing you'd like me to know about you that others may not know?
7. What is one thing I can do to help keep you motivated through class?
8. Do you know what career path you would like to follow? If yes, what is it? What interests you about this particular path?
9. How do you learn best?
  - a. Take this learning style survey if you're not sure:  
<http://www.educationplanner.org/students/self-assessments/learning-stylesquiz.shtml>
10. What expectations do you have of me as your teacher?

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### Task Three: Vocabulary-Latin Roots

**Instructions:** Glue the Latin Prefixes and Suffixes chart found at the back of this packet on to page 3 of your notebook. There will be a quiz over these the first week of school and will be worth 25 points.

### Task Four: Vocabulary- Flash Cards Instructions:

- Choose 30 words from the vocabulary list at the back of this packet. You will create vocabulary card for each word selected.
- Front of card:
  - Draw a picture that represents the selected word. The picture should be colored.
  - No words should be on this side of the card.
- Back of card:
  - List the vocabulary word ○ List one or two “linking words” or a phrase (what is a more simplistic or more concrete way to describe the chosen vocabulary word?)
    - Example: Cell Wall- “support” ○
  - Define each word
- Vocabulary cards should be put in a small Ziploc with your name on it. A large binder ring will be provided to you on the first day of school.

### Grading:

- Total Points: 150 points
- Each card will be worth 5 points (Front of Card- 2 points, Back of Card- 3 points)

### Task Five: Summer Lab Activity:

End of Summer Packet – read and complete

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### Vocabulary- Latin Roots

<b>Prefix</b>	<b>Meaning</b>	<b>Prefix</b>	<b>Meaning</b>
a-	Without, negative, not	Glycol-	Sugar, sweet
Aer-, aero-	Air, oxygen	Haplo-	Single
Anti-	Against	Hem-, hemo-	Blood
Auto-	Self	Hetero-	Different
Bacter-	Bacteria	Homo-	Same
Bi-	Two	Hydro-	Water
Bio-	Life	Hyper-	Above, excess
Calor-	Heat	Hypo-	Under, beneath, lacking
Chlor-	Green	Iso-	Equal
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-	Outer, external	Photo-	Light
En-, em-	In	Poly-	Many
End-, endo-	Within	Pro-, poto-	Before, primary
Epi-	Above, upon	Sacchar-	Sugar
Erythro-	Red	Sapro-	Decay, rotten
Eu-	Good, well, true	Somato-	Body
Ex-, exo-	Out of, outer	Uni-	One
Flagell-	Whip	Vas-	Vessel
Gam-, gamo-	United, joined	Zyg-	Yoke, union
<b>Suffix</b>	<b>Meaning</b>	<b>Suffix</b>	<b>Meaning</b>
-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 destroy	-phagia	Eating, swallowing
-cide	Kill	-philic	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	-tropism	Turning, responding to

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### Vocabulary- Flash Cards

1. Homeostasis
2. Capsid
3. DNA
4. RNA
5. Cytokinesis
6. Chromosome
7. Mitosis
8. Biomolecules
9. Carbohydrates
10. Lipids
11. Proteins
12. Nucleic acids
13. Replication
14. Codons
15. Mutations
16. Genotype
17. Phenotype
18. Adaptation
19. Natural selection
20. Biodiversity
21. diversity
22. Xylem
23. Phloem
24. Stoma
25. Guard cells
26. Primary succession
27. Secondary succession
28. Predation
29. Parasitism
30. Commensalism
31. Mutualism
32. Trophic levels
33. Prokaryote
34. Eukaryote
35. Organelles
36. Genetic code
37. Genetic drift
38. Gene flow
39. Endosymbiosis
40. Taxonomy
41. Binomial nomenclature
42. Dichotomous key
43. Photosynthesis
44. Cellular respiration
45. Enzymes
46. Catalyst
47. Substrate
48. Activation energy
49. Internal feedback
50. Limiting factor