

Name: _____



9th Grade Biology Summer Assignment

Dear Students:

Welcome to Biology! In order to do well in this course, you need to become fluent in the language of the discipline. Biology includes an extensive set of vocabulary words and phrases that you will most likely be unfamiliar with. However, there are tricks to figuring out new vocabulary words, terms, etc. Often, terms in biology come from a set of root words as well as prefixes and suffixes that give us clues as to what the terms mean. You will also be required to apply what you have learned in physics and chemistry in Biology.

This Summer Assignment will touch upon both of these ideas to help prepare you for the coming year. It will count as your first grade for the year so make sure you start off the year strong! Good Luck!

PSI Biology Prefix and Suffix Reference Sheet

Prefix/Suffix	Definition	Prefix/Suffix	Definition
<i>a-</i>	without	<i>multi-</i>	many
<i>ab-</i>	away from	<i>mut-</i>	to change
<i>ad-</i>	near	<i>myco-</i>	fungi
<i>aero-</i>	air	<i>neco-</i>	corpse
<i>alveus</i>	cavity	<i>neur-</i>	nerve
<i>arthron-</i>	joint	<i>nomen-</i>	name
<i>atrium-</i>	entrance room	<i>niga-</i>	black
<i>auto-</i>	self	<i>oculo-</i>	eye
<i>bacterio-</i>	bacteria	<i>oligo-</i>	few
<i>bi-</i>	two	<i>-oma</i>	tumor
<i>bio-</i>	life	<i>omni-</i>	all
<i>carnis-, carn-</i>	meat	<i>oo, ovum</i>	egg
<i>chele-</i>	claw	<i>osteo-</i>	bone
<i>chloro-</i>	green	<i>paleo-</i>	old
<i>chroma-</i>	color	<i>ped, pod</i>	foot

<i>-cide</i>	killer of	<i>peri-</i>	around
<i>con-</i>	with	<i>pestis</i>	plague
<i>cytis-</i>	pouch	<i>phaeo-</i>	brown
<i>-cyte, cyto-</i>	cell	<i>phage-</i>	to eat
<i>dermis-,</i>	skin	<i>-phore</i>	bearer
<i>derm-</i>		<i>photo-</i>	light
<i>di-</i>	two	<i>-phyll</i>	
<i>ecto-</i>	on the outside	<i>-phyte,</i>	leaf
<i>endo-</i>	inner, inside	<i>phyto-</i>	plant
<i>epi-</i>	upon	<i>pino-</i>	to drink
<i>eu-</i>	true	<i>plankto-</i>	drifting
<i>exo-</i>	outside of	<i>poly-</i>	many
<i>feto-</i>	fetus	<i>pseudo-</i>	false
<i>gastro-</i>	stomach	<i>primordis-</i>	original
<i>-gen</i>	producing	<i>pro-</i>	first
<i>geo-</i>	earth	<i>renes-</i>	kidney
<i>gymno-</i>	naked	<i>reptilis-</i>	crawling
<i>halo-</i>	salt	<i>rhiza, rhizo-</i>	root
<i>hemato-</i>	blood	<i>rodere</i>	to gnaw
<i>hemi-</i>	half	<i>sacchrum</i>	sugar
<i>herb-</i>	plant	<i>sapros-</i>	rotten
<i>hetero-</i>	other	<i>-scopy</i>	observation
<i>histo-</i>	tissue	<i>soma-</i>	body
<i>homo-</i>	same, like	<i>sonus-</i>	sound
<i>hydro-</i>	water	<i>sperma-</i>	seed
<i>hyper-</i>	over	<i>spirare</i>	breathe
<i>hypo-</i>	under	<i>-stasis</i>	position
<i>inter-</i>	between	<i>taxis</i>	arrangement
<i>intra-</i>	within	<i>telo-</i>	end
<i>iso-</i>	equal	<i>thallus</i>	green shoot
<i>-itis</i>	infection	<i>therm-</i>	heat
<i>karyo-</i>	nucleus	<i>thrombos</i>	clot
<i>leuco-</i>	white	<i>trans-</i>	across
<i>locus</i>	place	<i>tri-</i>	three
<i>-logy</i>	study of	<i>troph-</i>	feed

<i>lysis</i>	to loosen, break	<i>umbilicus</i>	navel
<i>macro-</i>	large	<i>uni-</i>	one
<i>maxilla</i>	jaw	<i>vasculum</i>	vessel
<i>mensis</i>	month	<i>vor-</i>	to eat, devour
<i>mesos-</i>	middle	<i>xero-</i>	dry
<i>meta-</i>	between	<i>zoo-, zoa-</i>	animal
<i>micro-</i>	small	<i>zygon-</i>	yoke
<i>mono-</i>	one	<i>-ase</i>	enzyme
<i>morph-</i>	form	<i>-ose</i>	sugar

Part I Instructions: Define the following terms using your prefix-suffix reference sheet. Underline the prefix &/or suffix in each biological term. Use a separate sheet of paper if necessary.

- **Example: THERMOMETER** – *therm means heat & meter means measure. Therefore, a thermometer is an instrument used to measure heat.*

1. Biology
2. Osteocyte
3. Dermatitis
4. Epidermis
5. Hematology
6. Herbicide
7. Neuritis
8. Protozoa
9. Carnivore
10. Polysaccharide
11. Hypertension
12. Hypodermic
13. Macronucleus

14. Pseudopod
15. Intracellular
16. Osteocyte
17. Endoskeleton

Part II Instructions: Using your prefix-suffix reference, write the biological term for each of the following layman's terms. Use a separate sheet of paper if necessary.

- **Example: A bacteria killer** – *cide means killer so the term is bactericide.*

18. White cell
19. Outside skeleton
20. Middle layer of the leaf
21. Outside of the cell
22. Study of animals
23. Study of form
24. A one-celled organism
25. A term describing an organism made up of many cells
26. Green leaf
27. Person that studies cells

Part III Expand your horizons

Now is your opportunity to explore the world around you and learn more about something that interests you.

Instructions: Below is a list of episodes from a famous documentary series called *Planet Earth*. Each episode focuses on a different region of the world such as deserts, caves, oceans, and more. Select a topic that is of interest to you. After you have finished watching the video, respond to the following questions. Spelling counts!

Planet Earth episodes:

https://www.youtube.com/results?search_query=planet+earth+full+episode

Questions:

1. What was the title of your episode, or, what areas did the episode focus on?
2. Pick an animal that was focused on in the episode. What special traits did this organism have which allowed it to be successful in its environment?
3. What energy sources (food sources) did this organism need to survive?
4. What factors pose a threat to this organism? What makes it struggle to survive?
5. List 3 things that you learned or that you found especially interesting.