

Biology Honors Summer Assignment 2017-2018

Maintaining good study habits and keeping the brain active over the summer is important for our Honors science students. WRHS Honors Biology courses are fast paced and rigorous, with instruction beginning from the first day of school. We have created this summer assignment to get the students thinking critically about Biology in preparation for their scientific journey in the year ahead. This assignment will be collected for a grade on the 2nd day of school (August 15th). Students will take a quiz on the flashcard terms on Tuesday August 15th in class.

Students who do not complete the summer assignment over break will be given an extension until the end of the first week of school (Friday 8/18) to complete all components of the summer assignment. Students whose summer projects are turned in on the due date of August 16^{5h} will receive a “pass” good for use during 1st quarter, to be determined by each teacher to fit their classroom. (examples: Free homework assignment, quiz retake, etc.) AND be exempt from the “make-up project”. ALL students will be expected to take the Scientific Process quiz on Tuesday 8/15, as these are terms/concepts that were reviewed in the middle school curriculum and are required “skills” in High School Science. Completing the summer project will help review those concepts and thus is strongly encouraged!

If you have any questions while you are working on this assignment please feel free to email one of the biology teachers. Please allow 72hr for a response- we are trying to enjoy summer too!

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1. Decoding the Scientific Language – Create a set of flashcards using the word parts given in the table. Flashcards should be in a Ziploc bag with your name on the front of it when turned in.
2. What makes something ‘alive?’ Essay– Articulate your thoughts on paper. Much of science is written down for others to learn from and expand upon.

As this is most likely your first high school science course, part of what you will learning is how to do science. Science is described as ‘a way of knowing,’ so you will be conducting an experiment of your own to learn something new. During the first week of school we will be discussing some data collection strategies that you can utilize to collect efficient and accurate data. **This will help you as you begin working on your Science Research Projects, which will be our major semester 1 project.**

While there is not specific assignment tied to this, it would be helpful to get a few rough ideas brainstormed to aid you when the school year starts. Future-you would probably appreciate it a lot!

Decoding the Scientific Language – Part 1

These flashcards must be on index cards with the word on one side and the meaning on the other. Include an “example” science term on the definition side for each card. If you ‘slack off’ on this, don't expect to learn or be able to apply these terms when we use them in class.

Scientific method/process
Hypothesis
Law
Theory
Data
Observation
Quantitative data
Homeostasis
Interdependence

Qualitative data
Abiotic factors
Biotic factors
Biodiversity
Independent Variable
Dependent Variable
Control Group
Constant

What makes something alive? – Part 2

Biology is the study of life, but what makes something alive? What’s the difference between being alive and living life? During this course we will be learning about living organisms and their interactions with the environment, and with each other. An important piece to learning biology is discerning what is alive from what isn’t (see your flashcards ☺).

For part 2 you will be writing your thoughts on the question: **What makes something alive?** In your writing you should use specific examples of living or non-living things and eloquently describe their relevance to the prompt. Using examples will help strengthen your writing and aid in justifying any claims you make.

The paper must meet these requirements in order to receive full credit:

1. 500 words minimum in MLA format
2. No longer than 3 pages
3. At least 3 examples are clearly justified
4. Double spaced

*Justification in science means to explain your reasoning. The word ‘because’ is often used in justifications as it is an explaining word.

This site can help you with MLA <https://owl.english.purdue.edu/owl/resource/747/01/>

Requirement	Points
Essay is a minimum of 500 words	___/5
The essay is no longer than 3 pages double spaced	___/5
Essay contains a clear thesis (claim)	___/5
Essay contains 3 or more pieces of evidence that supports the thesis (claim)	___/10
Explanation about how evidence relates to and supports the claim is present within the essay.	___/15
Essay contains no grammatical or spelling errors	___/5
Essay has a works cited page in MLA format. In-text citations are included.	___/5
	___/50