

**Bio 200 period 5**

Class ID: 3820898

Password: science

**Bio 300 period 6**

class ID: 3820900

Password: science

For the Letter to Darwin paper you will submit your work to [www.turnitin.com](http://www.turnitin.com) which is a website that checks for plagiarized, copied and “omitted” sources in your papers. In order to submit your paper it must be typed and uploaded to our class account using the Class IDs above.

## **DO NOT WAIT UNTIL THE LAST MINUTE TO TRY THE WEBSITE!**

You must turn in a completed **paper copy of the rubric** (you may give me the rubric the morning after the paper is turned in online). You **Do Not** need to turn in a printed paper copy of your letter.

You will have until 7:43 PM to submit your paper. Late papers will be rejected by the website and will receive a ZERO score. Turning your paper in early is HIGHLY RECOMMENDED.

### **A Letter to Darwin**

Charles Darwin’s theory of evolution provides that chance variation is the foundation of natural selection. Darwin, at his time in history, would not have been able to describe the mechanisms providing these variations or how they are expressed. However, you know that variation occurs in a population and understand the mechanisms by which this variation occurs.

**Write a letter to Charles Darwin, sharing with him at least three distinct ways in which variation is created in a population.** You should be careful to be complete and detailed in your descriptions. Keep in mind that Darwin has no knowledge about DNA, RNA, protein synthesis, genetics, mitosis, meiosis etc. so you will need to teach him as you go along.

You may write to Darwin in the first person but you must include parenthetical citations for any quoted material, with the exception of basic scientific definitions. For example: “DNA is a polymer made of nucleotides which are composed of a deoxyribose sugar bonded to a phosphate group and a nitrogen base.” does not require a citation if you looked it up in your notes. If on the other hand you copy and paste a definition from a website then you do need a citation.

**Your paper must be submitted to turnitin.com on or before Tuesday the 15<sup>th</sup> by 7:43 pm**

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Letter to Darwin Essay: Evaluation Rubric				
Name:		Period:		
This rubric is used to verify specific tasks performed when producing this essay. If the task has been successfully completed, all points are awarded. If the task is incomplete half points may be awarded. No points are awarded if the task is incorrect or not attempted.				
Category	Scoring Criteria	Points	Student Evaluation	Teacher Evaluation
Introduction 15 points	An opening statement makes the purpose of the letter clear. <i>(Opening statements do not begin, "this essay is about".)</i>	5		
	General background information is provided to establish the importance and scientific context of the thesis statement. <i>(Include definitions of key terms or a short outline of a complicated concept. Don't assume Darwin knows)</i>	10		
Three distinct sources of variation 30 points	Name variation source #1	2		
	Explain how source #1 creates variation	4		
	Show the connection of the variation to traits and evolution	4		
	Name variation source #2	2		
	Explain how source #2 creates variation	4		
	Show the connection of the variation to traits and evolution	4		
	Name variation source #3	2		
	Explain how source #3 creates variation	4		
	Show the connection of the variation to traits and evolution	4		
Body Background and information 30 points	Biological concepts for the topic are well covered. <i>DNA, RNA, Genes, Traits, Adaptation, Mutation, Evolution</i>	15		
	Information in the essay is presented in the student's own words, not "cut and pasted" from research sources. <i>(All modern biological terms must be explained)</i>	5		
	First person statements in the essay are supported by outside sources <i>(this means parenthetical citations/works cited)</i>	10		
Conclusion 10 points	Your thoughts presented in the essay are summarized and the most important research findings are restated. <i>(What do you want Darwin to remember?)</i>	10		
Overall 15 points	Completed Paper Rubric turned in by deadline	5		
	There are no spelling errors or visible corrections. <i>(Proofreading is required - even with spell check.)</i>	5		
	There are no obvious grammar or punctuation errors. <i>(Such as the use of "their - there", and "to - too - two")</i>	5		
Score	Total Points	100		
Deadline	All assignments are to be uploaded to <a href="http://www.turnitin.com">www.turnitin.com</a> by the assigned deadline. Essays submitted after the deadline will receive no credit and will be mulched for use in the greenhouse.			

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