

History of Evolution Webquest

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Introduction:

Have you ever wondered how and why organisms have developed certain characteristics? Why have humans developed larger brains over time? Why do marine iguanas have long sharp nails and blunted snouts? Why are snowy owls white and soundless in flight? Why do giraffes have such long necks? If you take a moment to think about an organism you will discover characteristics that are unique to that organism. Why are these characteristics present?

Task:

You are a journalist and have access to a unique time machine that allows you to investigate the history of evolution. Your special time machine will allow you to travel back in time to discover the history of evolution. After gathering information regarding the understanding of evolution you will write a letter from Charles Darwin to Jean Baptiste-Lamarck explaining the evolutionary process using examples from Darwin's voyage on the Beagle to support your claims.

Process:

Part I.

1. While investigating the historical aspect of evolution by exploring various websites complete guided notes.
2. After showing your instructor your completed notes discuss with a student partner your findings.

Part II.

3. See instructor to be assigned an organism to read about from Darwin's voyage. Note details and characteristics about assigned organism.
4. Make a drawing of your organism that will be referenced in the letter you write to Lamarck.
5. Prepare and write a letter to Jean-Baptiste Lamarck using your assigned organism that responds to his erroneous explanation of the mechanism of evolution.

Resources:

Part I:

<http://evolution.berkeley.edu/>

<http://www.aboutdarwin.com/index.html>

<http://library.thinkquest.org/C004367/eh.shtml>

<http://www.ucmp.berkeley.edu/history/evothought.html>

<http://www.victorianweb.org/science/sciov.html>

<http://www.bbc.co.uk/education/darwin/leghist/desmond.htm>

Part II:

There are many on-line copies of, *Voyage of the Beagle*, by Charles Darwin. As long as the chapter numbers are made accessible to you the information you need to find will be in the following chapters.

<http://www.literature.org/authors/darwin-charles/the-voyage-of-the-beagle/>

Hummingbirds: Chapter 12

Tortoises: Chapter 17

Aquatic Lizards: Chapter 17

Land Lizards: Chapter 17

Ostrich: Chapter 5

<http://www.aboutdarwin.com/index.html>

Evaluation:

| | 1 Point | 2 Points | 3 Points | 4 Points | Score |
|--|--|---|---|---|--------------|
| History of Evolution Guided Notes | Very little of guide is completed. There are gaping holes in the research gathered. | The research gathered is spotty. Some of the people are completed but 3 or more have not been researched. | Guide is completed yet there is a lack of attention to detail. The descriptions for contribution to understanding evolution are weak. | Guide is thoroughly completed with all aspects attended to with great detail. | |
| Partner Work | Did not interact with group when reviewing guided notes and showed severe lack of focus. | Interacted with group at times but clearly demonstrated a lack of focus and distracted others. | Interacted with group most of the time and remained on task most of the time. | Was actively engaged in discussion of the history of evolution and exhibited a strong sense of focus. | |
| Letter to Jean Baptiste Lamarck | | | | | |
| Writing Mechanics | Lacked letter format. Writing was disorganized and contained many misspellings and grammatical errors. | Letter was written in proper format but contained many misspellings and grammatical errors. | Letter was well written but contained misspellings and grammatical errors. | Letter was well organized and lacked misspellings and grammatical errors. | |
| Use of Examples | Did not provide specific examples from <i>Voyage of the Beagle</i> . | Provided some examples from <i>Voyage of the Beagle</i> but there was a significant lack of explanation. | Provided examples from <i>Voyage of the Beagle</i> with some explanation provided. | Provided significant examples from <i>Voyage of the Beagle</i> with substantial explanation. | |
| Scientific Accuracy | No comparisons were made between the work of Jean Baptiste Lamarck and Charles | The explanations are clear but there is little to no comparison made between Lamarck and Darwin. | Explanations of examples are clear but fail to provide a clear and accurate comparison between the works of | Explanations of examples provided clear and accurate comparisons between the works of Lamarck and | |

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|--|---------|--|---------------------|---------|--|
| | Darwin. | | Lamarck and Darwin. | Darwin. | |
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Conclusion:

The goal of this webquest activity is to learn from a historical perspective how we came to understand the process of evolution. While doing this you have researched the contribution that various people have made to the understanding of the evolutionary process and shared your findings with your peers. The assessment of your understanding is embedded within the letter that you have written to Jean Baptiste Lamarck.