

Endosymbiosis Web Quest & Discussion

Objective: Research and gain knowledge on endosymbiosis and the evidence for endosymbiosis. Discuss with classmates about this theory and its validity.

Part I: Endosymbiosis Web Quest Research

Use the following websites to help you research and answer the questions below:

- http://evolution.berkeley.edu/evolibrary/article/endosymbiosis_01
- <http://learn.genetics.utah.edu/content/begin/cells/organelles/>

Endosymbiosis Research Questions:

1. What did Kwang Jeon discover when researching Amoeba infected by bacteria?
2. What is endosymbiosis?
3. How does the meaning of the root words “endo-“ and “-symbiosis” help you understand the meaning of endosymbiosis?
4. How does endosymbiosis play a role in the evolution of prokaryotes to eukaryotes, and how are mitochondria important to this evolution?
5. What is the evidence scientists have to support endosymbiosis and the evolution of prokaryotes to eukaryotes?
6. What is another cell organelle that is thought to have originated through endosymbiosis?
7. Could you find free-living mitochondrion today? Why or why not?
8. What are some questions scientists still have about endosymbiosis?

Part II: Endosymbiosis Discussion:

Follow the instructions of your teacher to team up with another group or groups and discuss the questions below. You may want to record some notes during your discussion. At the conclusion of your discussion, record the following in your science notebook: write a 1–2 paragraph summary of your research and discussion. Include your knowledge/understanding of the meaning of endosymbiosis, the evidence for endosymbiosis, and your opinion on the validity of this theory and why. (NOTE: If this is done outside of class, simply answer the following questions in your notebook.)

Discussion Questions:

1. What did you learn about endosymbiosis and its evidence in your research?
2. Was anything you researched surprising to you?
3. What during your research confused you?
4. What more would you like to learn about endosymbiosis?
5. Do you feel this is a valid scientific theory? Why or why not?