Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ date: \_\_\_\_\_\_\_\_\_\_\_ pd:\_\_\_\_\_\_

**Endosymbiotic Theory: Chloroplasts & Mitochondria:**

Mr. Anderson (7min) Video shown in class-Students answer video ques.

<https://www.youtube.com/watch?v=-FQmAnmLZtE>

1. What are the two major groups of cells?

2. List some of the main differences between the two different groups of cell.

3. When we look at the fossil record it shows that Life started \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ years ago and we just see evidence of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cells on the planet.

4.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cells showed up about \_\_\_\_\_\_\_\_\_\_\_\_\_\_ years ago.

5. What does Endosymbiosis mean?

Endo= \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Symbiosis= \_\_\_\_\_\_\_\_\_\_\_\_

Bio= \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\*\*Therefore, endosymbiosis means: Organisms that are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ within \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

6. Aerobic \_\_\_\_\_\_\_\_\_\_\_\_\_\_ perform cellular respiration and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ perform photosynthesis. These prokaryotic cells were essentially engulfed by another host cell and became the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ that we have today.

7. Who was the first Scientist to be a big proponent of Endosymbiotic Evolution in Eukaryotic Cells?

8. What year did she write her theory and was it readily accepted in the scientific community?

9. Why do you think this was so?

10. How can the coral (in the example provided) do photosynthesis if coral is an animal?

11. The coral and the \_\_\_\_\_\_\_\_\_ are exhibiting a \_S\_\_\_\_\_\_\_\_\_\_\_\_\_\_ relationship known as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [ :) : ) ].

12. Mitochondria have their own \_\_\_\_\_\_ which makes them like a \_\_\_\_\_\_\_ with in our \_\_\_\_\_\_\_.

13. How do we inherit mitochondria?

14. Mitochondria used to be \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. They are now obligate symbionts inside of us meaning: they \_\_\_\_\_\_\_\_\_\_\_\_\_ live on their own and we let them make \_\_\_\_\_\_\_\_\_\_\_\_ for us.

15. Plants have \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ that came from the same origins.

***Print Article on the backside of questions***

***Article* Students read for H.W.**

[**http://evolution.berkeley.edu/evolibrary/article/history\_24**](http://evolution.berkeley.edu/evolibrary/article/history_24)

Students read article with a mission: either Highlight or underline, circle words that you do not know and look up definitions, write a question for each paragraph, and then write a summary at the end.