

Viewing Guide: Endosymbiosis

<http://www.sumanasinc.com/webcontent/animations/content/organelles.html>

1. Which organelles have features in common with whole cells?
2. Name and describe two of the features mentioned.
3. What kind of cells do mitochondria and chloroplasts resemble?
4. What does mitochondria/chloroplast DNA have in common with prokaryotic DNA?
5. How do the ribosomes in mitochondria/chloroplasts compare to prokaryotic ribosomes? To eukaryotic ribosomes?
6. What was Lynn Margulis' hypothesis about mitochondria and chloroplasts?
7. According to the theory, how were prokaryotes introduced into eukaryotes?
8. What could that prokaryote do, in terms of respiration?
9. What advantage did this confer for the eukaryote?
10. What is needed for aerobic respiration? What is produced?
11. What then happened to the prokaryote and eukaryote?
12. What organelles did those prokaryotes evolve into?
13. What did some of the 'primitive' eukaryotes then acquire?
14. What are cyanobacteria?
15. What did the cell with mitochondria AND chloroplasts evolve into?
16. What are two other pieces of evidence supporting endosymbiosis that are shown, but not directly stated, in the video?

