

The Endosymbiont Theory

Watch the video on www.biologybynapier.com on the Cell Unit page. Click the link Endosymbiont Theory. Or go to this link: <http://www.sumanasinc.com/webcontent/animations/content/organelles.html> and answer the following questions.

1. Mitochondria and chloroplasts both resemble prokaryotic cells.

List 3 ways:

- 1.
- 2.
- 3.

4. What do these similarities imply that these two organelles once were?

5. When one large prokaryotic cell (referred to as a primitive eukaryote) engulfed another prokaryotic cell that performed aerobic respiration, how did each benefit?

Primitive eukaryote benefited by . . .

Prokaryotic cell benefited by . . .

6. Eventually the two cells evolved to become one. The aerobic prokaryotic became which organelle?

7. What organelle did the photosynthetic prokaryotic engulfed by the larger cell become?

8. Both of these organelles exist today together in what type of cell?