**Instructions:**

* Open the presentation.
* Interact with it.
* Answer the “Questions to answer”.
* Make sure you understand the “Things you should make sure you understand”.
* View the “Supplementary Resources” and take notes
* Write down any questions that you have about the material.

**Topic Presentation:**

[**click here**](http://prezi.com/jmuhrot7ycwm/ap-bio-cells-1-intro-endomembrane-system/)

**Textbook Correlations:**

* **Chapter 4: A Tour of the Cell**
* **Chapter 5: Membrane Transport and Cell Signaling**

**Supplementary Resources:**

**“Crash Course: Biology” Videos:**

[Eukaryopolis-The City of Animal Cells: Biology #4](http://www.youtube.com/watch?v=cj8dDTHGJBY&list=PL3EED4C1D684D3ADF&index=4&feature=plpp_video)

[Plant Cells: Biology #6](http://www.youtube.com/watch?v=9UvlqAVCoqY&list=PL3EED4C1D684D3ADF&index=6&feature=plpp_video)

**Videos By Paul Andersen:**

“[Compartmentalization](http://www.youtube.com/watch?v=2rihCCBzqMc)”

“[A Tour of the Cell](http://www.youtube.com/watch?v=cqzGWgAr4Ww)”

“[Cellular Organelles](http://www.youtube.com/watch?v=aczbMlSMr8U)”

**Questions to answer:**

1. Why is the cell theory signficant (don’t just state the tenets, explain what it means and why it is a theory)?
2. How does the ratio of a cell’s surface area to volume place upward and downward limits on cell size?
3. How do organelles allow for increased complexity in cells?
4. Draw an label a typical eukaryotic cell.  Briefly state the structure and function of the following organelles:
   1. Nucleus
   2. Ribosomes (free and bound)
   3. Endoplasmic reticulum (rough and smooth)
   4. Golgi Apparatus
   5. Vessicles
5. Explain how each of the organelles above functions in the endomembrane system.

**Things you should make sure you understand:**

* How advances in microscopy led to advances in cytology.
* The benefits and disadvantages of light microscopy and electron microscopy.
* How the information system of cells (DNA->RNA -> Protein) allows for cells to accomplish all physiological processes