Cell Theory

Recall that Robert Hooke discovered cells in the mid-1600s. Many people showed interest in learning more about cells; however, it wasn’t until the 1830s that more information was being accepted as common knowledge.

1838 – Matthias Schleiden

 Botanist who realized that all plants are made of cells.

1839 – Theodore Schwann

 Zoologist who realized that all animals are made of cells.

1855 – Rudolf Virchow

 Proposed that all cells come from preexisting cells.

3 Major ideas of the Cell Theory

 1) The cell is the basic functional and organizational unit of life.

 2) All living things are made of one or more cells.

 3) All cells come from preexisting cells.

Review cell parts from the powerpoint on the website.

Plant vs animal cells

|  |  |  |
| --- | --- | --- |
| Plantscell wallchloroplastvacuole – single large vacuole | Bothnucleusnucleolusribosomesplasma membranerough ERsmooth ERgolgimitochondrialysosomes | Animalscytoskeletonvacuole – many small vacuoles |

Prokaryotes vs. Eukaryotes

Prokaryotes only have cell membrane, ribosomes, DNA, and sometimes cell wall (major point: NO NUCLEUS)

Eukaryotes have all of the more complex structures we have talked about – plant and animal cells are eukaryotic