

Chap 8.1 - Life is Cellular

Essential Question(s):

Questions:

The Discovery of the Cell

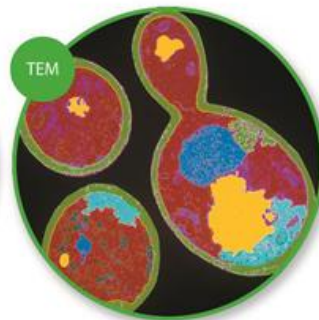
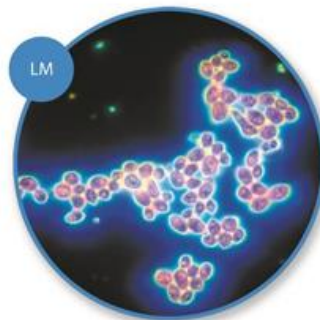
- The first microscopes were made in the _____ by eyeglass makers in _____.
- Robert Hooke looked at slices of _____ in 1665. He called these _____.
- Anton van Leeuwenhoek was the first to observe _____ microorganisms in _____ water.
- By the mid _____, scientists had discovered that _____ living things are made of _____.

The Cell Theory

1. _____ living things are made up of _____.
2. Cells are the _____ units of structure and function in _____ things.
3. _____ cells are produced from _____ cells.

Exploring the Cell

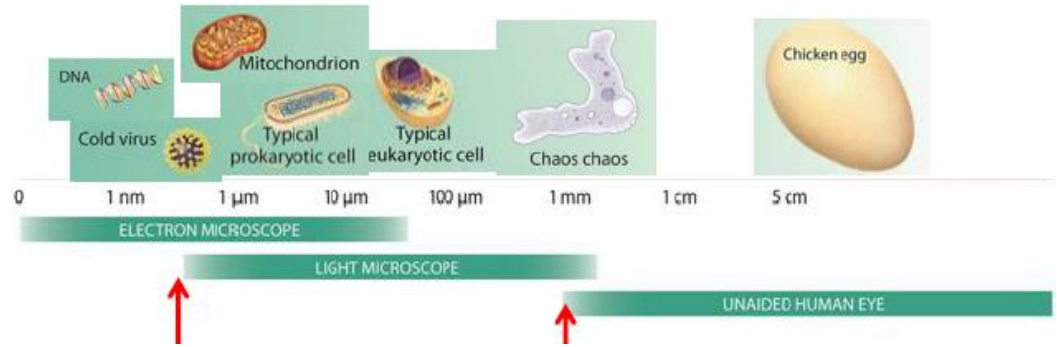
- Most microscopes use _____ to _____ the image of an object by focusing light or electrons.
- **Light Microscopes**
- **Electron Microscopes:** _____ types of electron microscopes:
 - *Transmission* - Samples must be _____ into thin slices to be viewed, which means the samples are viewed _____ dimensionally.
 - *Scanning* - Samples can be viewed _____-dimensionally.
 - For both types of EM microscopes, samples _____ be living. In light microscopes, samples _____ be living.
- **Micrographs:** A micrograph is a _____ of an object seen _____ a microscope.



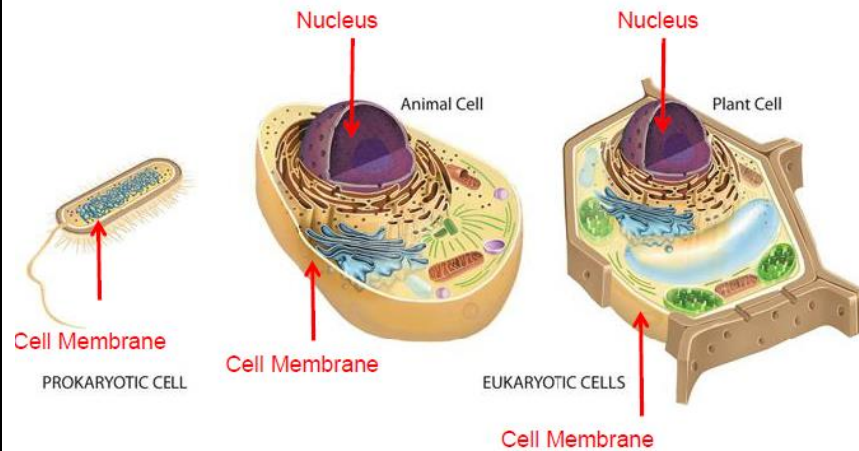
Questions:

Cell Size - Certain _____ of measurement are used for _____ objects, such as cells.

- The human _____ can see objects _____ than about 0.5mm



Prokaryotes and Eukaryotes



- _____ cells are surrounded by a _____ flexible _____ called a **cell membrane**.
- The **nucleus** is a _____ membrane-enclosed structure that contains _____ material (_____).

Prokaryotes

- Cells that do _____ enclose their _____ material within a nucleus.
- Generally _____ and _____
- Ex: bacteria

Eukaryotes

- Cells that _____ enclose their genetic material within a _____.
- Generally _____ and more _____.
- Have _____ membrane-bound organelles
- Ex: protists, plant cells, animal cells

Summary:
