

scientific method - ~~As~~ Observations lead to questions
generates hypothesis
design + conduct experiment to test it.
Based on results accepts, rejects, modifies.

Spontaneous generation - The theory that living organisms arose from non-living matter. led to development of scientific method.

Characteristics

- Bacteria - single cell, cell wall peptidoglycan. 1 chromosome.
- (s) Archaea - lack peptidoglycan, unique lipids. Forms biofilm colonies.
- Protists - Algae - cell walls, cellulose pectin silica -
- Fungi - cell walls chitin, cellulose, glucan.
- Viruses - no cellular organisation, intracellular parasites, nucleic acid protected by capsid.

Characteristics of all living organisms.

- composed of cells
- respond to environment
- obtain + use energy
- allow for evolutionary adaptation.
- complex + ordered
- grow, develop + reproduce.
- maintain homeostasis.

Algae is eukaryotic + photosynthetic, however cyanobacteria cells are like prokaryotic ^{gram neg.} are bacteria.