

Microbiology: What is it?

- Study of organisms who are too small to be seen without a microscope.
- Study of small organisms or microorganisms. NOT just Bacteria!
- Study of single celled organisms. The original cell biology!
- Categories & subjects based on the type of organisms:

(1) Viruses – Virology (acellular)

(2a) Bacteria – Bacteriology (e.g. Prokaryotes)

(2b) Archea – Archeaology? (already taken)

(3) Fungi – Mycology

(4) Algae – Phycology

(5) Protozoa – Protozoology

Reasons to study Microbiology:

(1) Bacteria are part of us! E. coli lives in our gut and produces essential vitamins (e.g. K).

(2) Infectivity & Pathogenicity; MO's have the ability to cause disease in compromised &/or healthy hosts.

(3) MO's in the environment; Bioremediation or use of MO's to breakdown waste compounds like oil, pesticides, etc. Mineral cycling of elements like N, S, Fe, etc.

(4) Applied Microbiology or use in agriculture and industry.

(5) Understand basic biological processes: Evolution, Ecology, Genetics, etc.