

What is taxonomy?

The science of classifying organisms

Phylogeny is the study of the evolutionary history of organisms.

What are the three domains of life?

Eukarya

Bacteria

Archaea

Explain scientific nomenclature.

- first term capitalized, can be abbreviated
- second term lower case
- italicized in print, underlined if handwritten

What is the taxonomic hierarchy?

Domain

Kingdom

Phylum

Class

Order

Family

Genus

Species

Define the following terms:

- Clone: population of cells derived from a single cell, genetically identical

- Strain a group of genetically different cells
- Animalia multicellular, no cell walls, chemo-heterotrophic, ingest food
- Plantae multicellular, cellulose cell walls, photoautotrophic
- Fungi chemo heterotrophic, uni- or multi-cellular, chitin cell walls, absorb nutrients
- Protista the catch-all kingdom of eukaryotes
- Viral species viral population with similar characteristics & shares a particular niche

What is classification & identification?

Classification: placing organisms in groups of related species (already known)

identification: matching characteristics of an unknown organism to a list of known organisms

List identification methods.

- morphological characteristics
- differential staining
- biochemical tests

A serum is the liquid remaining after blood plasma is clotted.

antiserum is a solution of specific antibodies.

What is the slide agglutination test?

Mix known antiserum with unknown bacteria

agglutination = positive test

no agglutination = negative test

What is phage typing?

method to determine which phages a bacterium is susceptible to

What can genetics be used to identify?

DNA base composition

DNA fingerprinting

rRNA sequencing

PCR