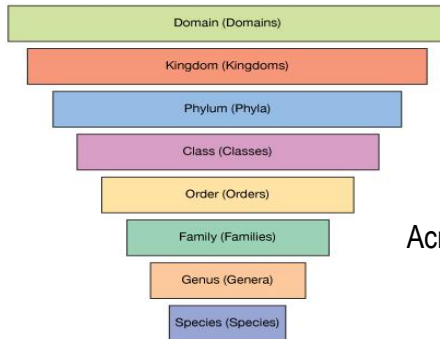


CONCEPT: TAXONOMY

- Taxonomy is the branch of science that _____, identifies & properly names living organisms.
- There are _____ biological classification categories used to identify *all* life.

EXAMPLE:



Domain, Kingdom, Phylum, Class, Order, Family, Genus, Species.

Most Inclusive

Least Inclusive

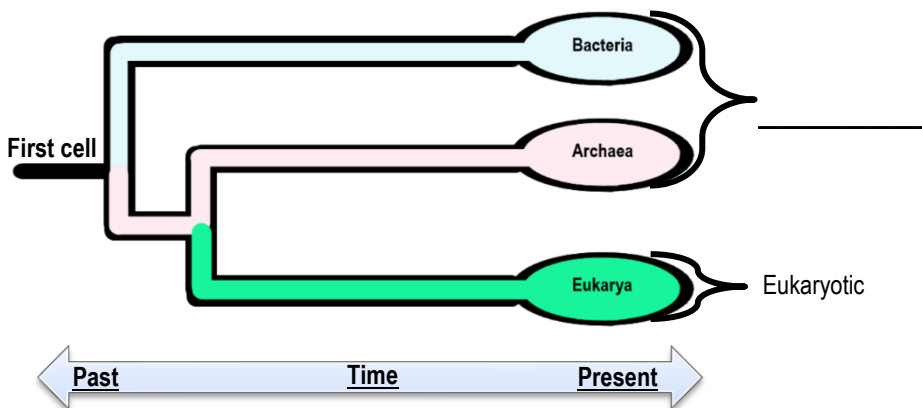
Acronym: ear ing hilip ame ver or reat oup.



Domains of Life

- Bacteria & archaea are single-celled _____ organisms because they lack a membrane-bound nucleus.
 - Bacteria most closely resemble the first cells (less divergences in evolutionary tree).
 - Archaea, such as _____ & thermophiles live under intense conditions.
- Eukarya: cells with a membrane-bound nucleus & include all *multicellular organisms* & single-celled _____.

EXAMPLE: Three Domains of Life



Classifications	Human	Ostrich
Domain		Eukarya
Kingdom	Animalia	Animalia
Phylum	Chordata	Chordata
Class	Mammalia	Aves
Order	Primate	Struthioniformes
Family	Hominidae	Struthionidae
Genus	Homo	Struthio
Species	Sapien	Camelus

- Prokaryotic & eukaryotic: broadest & most distinct groupings of all life. Let's compare and contrast!

EXAMPLE:

Prokaryotic Cells	Both	Eukaryotic Cells
1) _____ Nucleus	- Cell Membrane	1) Contain a Nucleus
2) Size: Smaller (1-5 μm)	- _____	2) Size: Larger (10-100 μm)
3) Less Complex	- Display all _____ Characteristics of Life	3) More Complex
4) Only Unicellular	- Contain:	4) Unicellular or _____
5) _____ DNA	- Proteins	5) Linear DNA
6) _____ membrane-bound organelles	- Nucleic Acids	6) Have membrane-bound organelles
7) Cell Division: Binary Fission	- Carbohydrates	7) Cell Division: _____
8) Smaller _____ Ribosomes	- Lipids	8) Larger 80S Ribosomes

CONCEPT: TAXONOMY

PRACTICE: Which of the following are correctly listed from least inclusive to most inclusive?

- a) Domain → Kingdom → Phylum → Class → Order
- b) Domain → Kingdom → Class → Phylum → Order
- c) Species → Genus → Family → Order → Class
- d) Species → Genus → Family → Class → Order

PRACTICE: Which of the following statements is generally considered true for both prokaryotes and eukaryotes?

- a) Both have cells with nuclei.
- b) Both have cell walls.
- c) Both have circular DNA
- d) Both have ribosomes & plasma membranes