

Biology
Microbes / Classification
2012 - 2013
#3

I. Heirarchical Classification System

A. Kingdom

B. Phylum

C. Class

D. Order

E. Family

F. Genus

G. Species

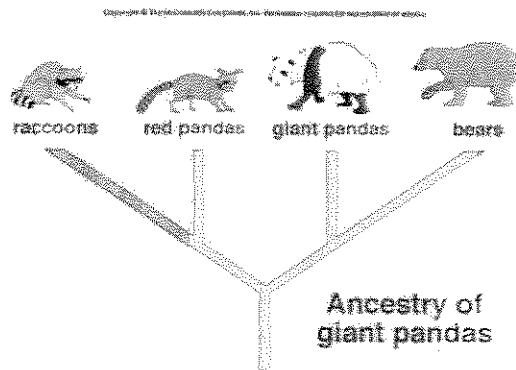
- Scientific name = Genus + species

II. What criteria is used to classify organisms ?

A. similar traits

B. evolutionary relationships

1. Use cladogram to show relationships



III. Bacteria = Prokaryotic

vs.

Eukaryotic

* small

* large

* few organelles

* many organelles

* short DNA

* long DNA

* aerobic / anaerobic

* aerobic

A. Bacterial cell shapes

1. coccus = round
2. bacillus = rod
3. spirillum = spiral

B. Bacterial cell arrangements

1. strepto = chain
2. staphylo = clump
3. diplo = pairs

C. Bacterial ecology

1. autotrophic = can make their own food
 - photosynthetic = use the sun (Cyanobacteria)
 - chemosynthetic = use chemicals
2. heterotrophic = can't make their own food
 - saprophytic = decompose organic material
 - pathogenic = cause disease

D. Bacterial reproduction

1. binary fission (asexual reproduction) = create individuals that are genetically identical
 - no mixing of genetic material (sexual)