

Robin Lloyd & Robert Roy Britt / LiveScience

SOURCES: Ellen Thomas, Wesleyan Univ.; Smithsonian Institution; Washington State Univ.; Talkorigins.org; other reportin



Biology 20 – Chapter 5
Taxonomic Systems – Reading Assignment

Name:

1. What are the two main purposes for having a biological classification system? (pg 135)

identifying organisms
recognizing groupings of living things

2. What is taxonomy? (135)

science of classifying organisms

3. a. Who came up with our current system for classifying living organisms? (135)

Carl Linneus

b. What is this system based on? (135)

physical and structural features

4. What is binomial nomenclature? (135)

2 part naming system made up of genus name and species name

5. Why is the latin language used for classification?

common language for all scientists

6. Define genus. (135)

first part of a scientific name

includes many species

7. Define species. (135)







group of organisms that look alike and can interbreed under natural conditions to produce fertile offspring

8. What are the seven levels of classification? (135)

King Phillip Came Over For Good Soup

Scientific classification	
Kingdom:	Animalia
Phylum:	Chordata
Class:	Mammalia
Order:	Carnivora
Family:	Canidae
Subfamily:	Caninae
Tribe:	Canini
Genus:	Canis
Species:	<i>C. lupus</i>

Table 2 A Six-Kingdom System of Classification

	Kingdom	General characteristics	Cell wall	Representative organisms
	1. Eubacteria	<ul style="list-style-type: none"> simple organisms lacking nuclei (prokaryotic) either heterotrophs or autotrophs all can reproduce asexually live nearly everywhere 	often present (contains peptidoglycan)	bacteria, cyanobacteria
	2. Archaeobacteria	<ul style="list-style-type: none"> prokaryotic heterotrophs live in salt lakes, hot springs, animal guts 	present (does not contain peptidoglycan)	methanogens, extreme thermophiles, extreme halophiles
	3. Protista	<ul style="list-style-type: none"> most are single-celled; some are multicellular organisms; eukaryotic some are autotrophs, some heterotrophs, some both reproduce sexually and asexually live in aquatic or moist habitats 	absent	algae, protozoa
	4. Fungi	<ul style="list-style-type: none"> most are multicellular all are heterotrophs reproduce sexually and asexually most are terrestrial 	present	mushrooms, yeasts, bread moulds
	5. Plantae	<ul style="list-style-type: none"> all are multicellular all are autotrophs reproduce sexually and asexually most are terrestrial 	present	mosses, ferns, conifers, flowering plants
	6. Animalia	<ul style="list-style-type: none"> all are multicellular all are heterotrophs most reproduce sexually live in terrestrial and aquatic habitats 	absent	sponges, worms, lobsters, starfish, fish, reptiles, birds, mammals

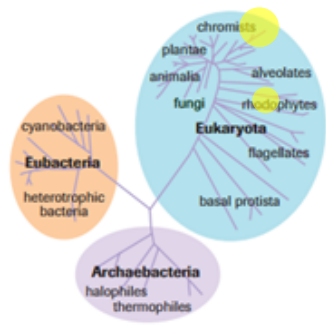


Figure 7 A three-domain system of classification

10. Define phylogeny. (pg 138)

The history of the evolution of a species or a group of species

11. What is a phylogenetic tree? (pg 138)

a branching diagram showing the relationships between groups of organisms

