

New Terms - The Diversity of Life

taxonomy -	the classification of organisms, which generally classifies them according to their reproductive parts.
binomial nomenclature -	basis for naming organisms, particularly plants and animals. Is the scientific naming used to identify the genus and the species - the two items that distinguish one organism from another. Like <i>Homo sapiens</i> (the first is the genus, the second is the species).
species -	organisms that interbreed under normal circumstances, like horses with horses, people with people.
genus -	groups of similar species the plural form is genera.
family -	groups of similar genera
order -	groups of similar families
class -	groups of similar orders
divisions -	in the plant kingdom they are groups of similar classes
phyla -	phylum is the singular form and in the animal kingdom is the groups of similar classes.
kingdom -	groups of similar organisms (like animals, plants, etc.)
animalia -	kingdom of animals that is divided into two parts, invertebrates (animals without backbones) and vertebrates (animals with backbones).
plantae -	kingdom of plants including mosses, ferns, and seed producing plants.
fungi -	kingdom of fungi like yeasts, molds, and mushrooms
protista -	includes the protozoa and other one-celled eukaryotic organisms like one-celled algae.
monera -	the bacteria and cyanobacteria, single-celled organisms that are prokaryotic
cocci -	type of spherical bacteria, there are 3 types (staphylococci - irregular clusters of cocci, streptococci - chains of cocci bacteria - the cause of strep throat, and diplococci - pairs of cocci).
bacilli -	rod-shaped bacteria
spirochetes -	rigid spiral bacteria
spirilla -	flexible spiral bacteria
heterotrophic -	describes an organism that gets its food from organic matter
saprobic -	describes organisms that feed on dead or decaying organic matter - describes most of the bacteria.
autotrophic -	organisms that are able to produce their own food - especially by photosynthesis.
photosynthetic bacteria -	autotrophic bacteria with pigments that permit them to produce food by photosynthesis.

chemosynthetic bacteria	- autotrophic bacteria that use chemical reactions as a source of energy.
psychophilic	- describes bacteria that live in very cold temperatures.
mesophilic	- describes bacteria that live at human body temperatures.
thermophilic	- describes bacteria that live at very high temperatures.
facultative	- describes bacteria that can live either with or without air.
pathogenic	- describes bacteria that cause human disease
cyanobacteria	- blue-green algae, a major part of the plankton in the oceans.
virus	- acellular particles that lack properties of living things but are able to replicate inside living cells.
genome	- the core of the virus that contains the genes
capsid	- the protein coating of a virus
Protozoa	- single-celled or colonial organisms, subdivided into 4 different phyla according to their method of movement.
Mastigophora	- characterized by a single whip-like flagella, <i>Euglena</i> is a good example.
Sarcodina	- characterized by movement with pseudopodia which are simply extensions of the cytoplasm. Typical examples are the amoebas.
Ciliophora	- move by means of small "hairs" called cilia. The <i>Paramecium</i> is a well-known member of this phyla.
Sporozoa	- exclusively parasites, they produce spore-like bodies. Plasmodium is a good example of this phyla and is the cause of malaria.
Algae	- refers to a large number of photosynthetic organisms that are not considered plants, though they have chlorophyll. Most live in the oceans.
Rhodophyta	- the red algae
Pyrophyta	- represented by the dinoflagellates, which are single-celled organisms surrounded by a plate of armor and they have two flagella - when reproducing in large numbers create the condition known as red tide.
Chrysophyta	- the golden algae and are represented by the diatoms which consist of cell walls containing silica.
Phaeophyta	- brown algae
Chlorophyta	- green algae
Oomycetes	- called water molds and have special sexual spores called oospores. Also in sexual reproduction they form a special cell called a zoospore which has a flagella and is able to move like an animal cell.
Zygomycetes	- commonly called the terrestrial fungi. They are coenocytic - meaning the hyphae have no cross walls. Sexually opposite hyphae form zygospores. Commonly represented by the grey or white mold on bread.
Ascomycetes	- members range from mildews to cottony molds to large cup-like fungi. During sexual reproduction they form a sac known as the ascus that is

Basidiomycetes - filled with ascospores.
contain basidiospores, sexual spores on basidia (a club-like structure).
Mushrooms are a well-known member of this class.