Organism Classification

OCB 3017

* Domain Archaea – prokaryotes
	+ Includes the extremophile bacteria like those found in hydrothermal vents
* Domain Bacteria – prokaryotes
	+ Includes *Vibrio, E. coli, Staphylococcus,* all that used to be in Kingdom Monera
	+ Includes photosynthetic bacteria – Cyanobacteria
		- *Anabaena, Gleocapsa*
* Domain Eukarya – eukaryotes
	+ Protists
		- Algae – photosynthetic
			* Microscopic – phytoplankton
			* Macroscopic – seaweed, *Sargassum*
		- Protozoans – heterotrophic
			* Part of the zooplankton
	+ Plants – multicellular, photosynthetic
		- Nonvascular plants - mosses
		- Vascular plants
			* Seedless - ferns
			* Seed
				+ Gymnosperms
				+ Angiosperms

Mangroves, sea grasses (turtle grass, manatee grass), dune plants

* + Animals – multicellular, heterotrophic, have mobility at some point in life cycle
		- Parazoa – no embryonic tissues
			* Porifera – sponges
				+ Yellow tube sponge, fire sponge, lavender tube sponge
		- Eumetazoa – true embryonic tissues
			* Radially symmetrical animals – 2 embryonic tissues
				+ Cnidarians – brain coral, branching coral, rose coral, star coral, sea fan, sea feather

Class Anthozoa – sea anemones, corals

brain coral, branching coral, rose coral, star coral, sea fan, sea feather

Class Hydrozoa – hydra

Class Scyphozoa – “jellies”

* + - * + Ctenophores
			* Bilaterally symmetrical animals – 3 embryonic tissues
				+ Acoelomate – no true gut

Platyhelminthes – flatworms

Class Turbellaria – free living

Class Trematoda - flukes

Class Cestoda - tapeworms

* + - * + Coelomates – true gut

Protostomes

Mollusca

Class Polyplacophora - chitins

Class Gastropoda – snails

Class Bivalvia – clams, oysters

Class Cephalopoda – octopus, squid

Annelida

Class Oligiochaeta – earthworms

Class Hirudinea – leeches

Class Polychaeta – many marine species, feather dusters, sand worms, reef building worm found here in florida

Nematoda

Round worms

Arthropoda

Chelicerates – horseshoe crab

Crustaceans – crab, lobster, barnacle

*Limulus polyphemus, callinectes sapidus*

Insects and relatives

Deuterostomes

Echinoderms

Class Ophriuroidea – brittle stars

Class Echinoidea – sea urchins

Class Asteroidea – sea stars

Class Holothuroidea – sea cucumbers

Class Crinoidea – sea lilies

Chordates

Subphylum Urochordata – tunicates

Subphylum Cephalochordata – lancelets

Subphylum Vertebrata

Agnatha – jawless fish

Gnathostomes – jawed animals

Jawed Vertebrates

* Class Chondrichthyes – sharks, rays
* Class Osteichthyes – bony fish, ray finned fish
	+ Tuna, grouper, sailfish, seahorses, eels, red drum, snapper
* Class Amphibia
* Class Reptilia – includes birds
	+ Sea turtles, sea snakes, pelican, penguin, seagull, osprey, killifish
* Class Mammalia
	+ Carnivores – sea otters, polar bears, pinnipeds (walrus, seals, sea lions)
	+ Sirenians – manatees
	+ Cetacea
		- Odontocetes – toothed whales
			* Dolphins, porpoises, orca
		- Mysticetes – baleen whales
			* Gray whale, right whale, blue whale