

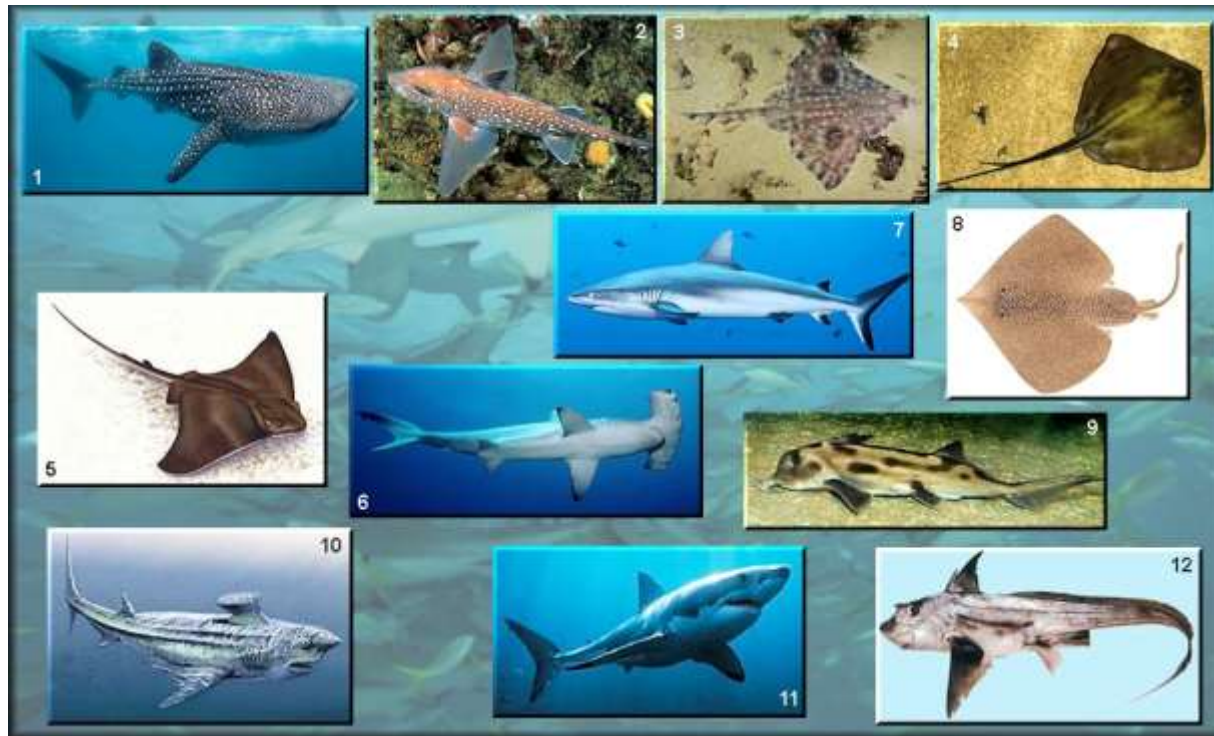
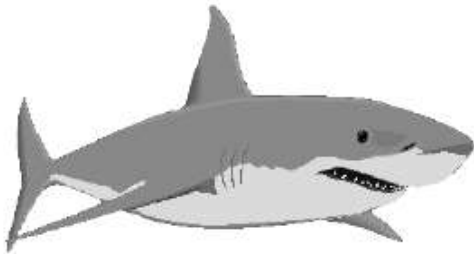
CHORDATE CLASS 7

This class includes organisms like the lamprey that have a dorsal nerve cord. They **do not have jaws**, are eel-shaped, prey on fish, and have larval forms which are different from the adults. Do not have hair, feathers, or jaws. Examples: lampreys, hagfish



CHORDATE CLASS 2

No hair or feathers. Possess jaws. includes sharks and rays. They have a **cartilage skeleton, not bone**. They are not buoyant like other fish so they must swim or sink. Like other fish they have a **lateral line** system which detects differences in water pressure, the equivalent of our hearing.



CHORDATE CLASS 5

the bony fish. This is the most numerous of all vertebrate classes. In fish, O_2 is exchanged via the gills, which are covered by an **operculum** which helps to draw water across/through the gills. Their swim bladder is an air sac used to control buoyancy, thus unlike the sharks, bony fish can hold still at any depth and not sink. Most fish we eat are in this class (salmon, cod, tuna etc)



bluefish



pike perch



monkfish



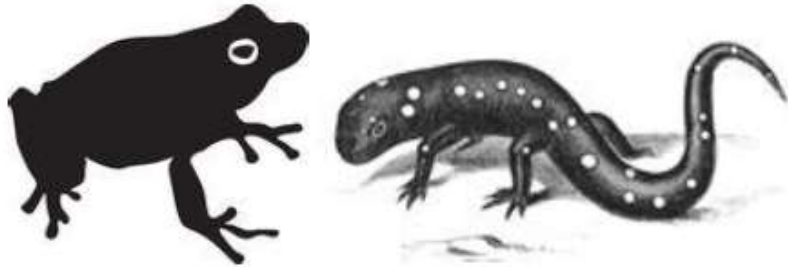
sea bass



tuna

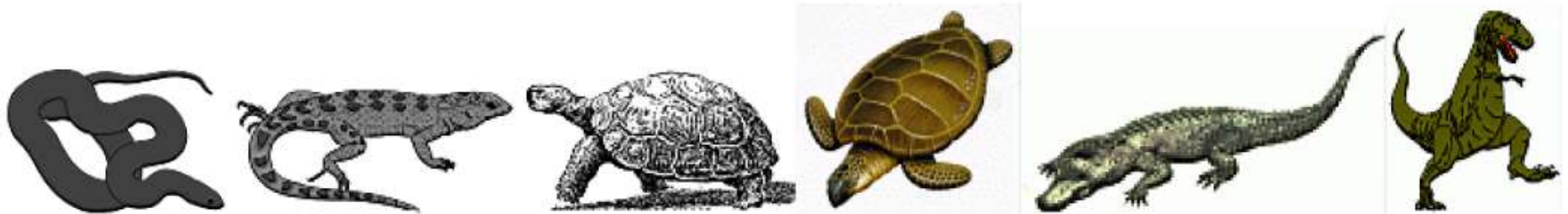
CHORDATE CLASS 3

frogs, newts, and salamanders. They were the first land vertebrates. Frogs, especially, go through **metamorphosis**. Their eggs have no egg shells, so the sperm can swim through the water to the eggs, and the embryos must develop in water. Amphibians are **exothermic** (**exo** = out, outside), that is they maintain their body temperature through external means such as the sun or the water.



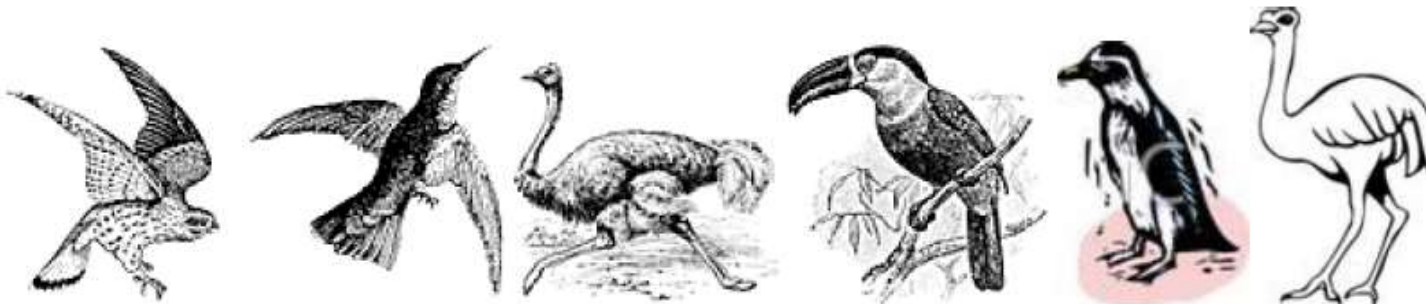
CHORDATE CLASS 1

snakes, turtles, crocodiles, and lizards. Reptiles have scales and are dry to the touch. Their eggs have leathery shells. Reptiles are **exothermic** (**exo** = out, outside), that is they maintain their body temperature through external means such as sunning on a rock or seeking shade. Reptiles need less food/energy to live and live longer than a comparable-sized mammal. There is a debate whether DINOSAURS were like modern day reptiles. ***NOTE-TURTLES AND TORTOISES ARE REPTILES, *NOT* AMPHIBIANS!!!!!!!!!!!!!!!!!!!!!!!!!!!!**



CHORDATE CLASS 4

the birds. It is thought that birds are descended from dinosaurs, as evidenced, in part, by the scales on their feet. Also, feathers are modified scales: a key characteristic of birds is that they have feathers. Birds' bones are light weight for flight. Birds are **endothermic** (**endo** = within, inner), that is, they control their body temperature from within (they're "warm-blooded"). Birds' vision is the best of all vertebrates: soaring hawks can spot small mice scrambling through the grass in a field far below them. Birds have shelled eggs and so must have internal fertilization — the egg must be fertilized before the hen's reproductive tract secretes an eggshell. Generally, mating is accompanied by an elaborate courtship ritual. Eggs and often young birds are more exothermic (are not able to control their body temperatures from within) and so must be brooded/incubated by parents.



CHORDATE CLASS 6

the mammals. Key characteristics of mammals are the presence of fur/hair and mammary glands, derived from modified sweat glands, which produce milk for the young. Mammals have a diaphragm to aid in respiration. They are **endothermic**. Most mammals bear live young



Bat



Horse



Rat



Rabbit



Lion



Whale



Tiger



Shrew