

# Quick Guide to Classification of the Animal Kingdom

## NOTES:

- You can use these as single pages, or you may want to cut and tape them into one very long chart to hang on a wall (so you can see the entire kingdom at once).
- Notice that the classification categories (phyla, class, order, family) are not only typed in the same font, but also line up vertically (all have the same amount of indent). In other words, if you hold a ruler vertically under the word “Class,” all the classes will be right along the edge of the ruler.
- Knowing Greek and Latin root words can help you decode what these complicated-looking names mean. Often they mean something very simple, like “big nose.”
- If you need help with pronunciation, consult a dictionary. The dictionary will have the word spelled out phonetically and will tell you which syllable gets the accent.

## PLAY A GAME:

Try playing a “20 Questions” game where one player thinks of an animal and the others try to guess what it is using only “yes or no” questions. You can use the categories to help narrow down the possibilities very quickly.

## MUSIC:

I have written three science songs that teach classification: “The Classification Song,” “The Marine Invertebrates Song,” “The -Optera Song of Insects,” and “The Arthropods Song.” They are on “The Science Jukebox” CD, available through either my website or [cdbaby.com/ellenmchenry](http://cdbaby.com/ellenmchenry). (You can download single songs on [cdbaby.com/ellenmchenry](http://cdbaby.com/ellenmchenry).) If you download them and need the lyrics, they are printed on the last page of this pdf file.

MY DISCLAIMER: I am not a professional zoologist. All the information for this chart came from books and websites that I consulted. If you find any discrepancies, email me and let me know. Thanks!



Here are a few of the most common Latin/Greek word roots. This is not an exhaustive list, just some of the more common roots you'll see in zoology.

a	without
amphi/ambi	both
arthro	joint
bi	two
brachi	arm
cephalo	head
cervid	deer
cervix	neck
chilo/chello	lip
chiro	hand
chondro/chondra	cartilage
cnida	stinging nettle (a plant) (the "c" is silent; say "ni-da")
coelen	hollow
cteno	comb (the "c" is silent; say "ten-o")
coleo	sheath or scabbard (the covering for a sword)
derm/derma	skin
di/diplo	two
dicty	net (like a fishing net)
echino	spiny
equus	horse
gastro	stomach
hippo	horse
hydro/hydra	water
hymen	membrane
hyper	over
hypo	under
iso	equal or same
lepido	scale or scaly
macro	large
micro	small
moll	soft
morph	shape
myo	muscle
ortho	straight
osteo	bone
odont	tooth
oto	ear
pinna	wing or feather
platy	flat or broad
pleuro	side or rib
pod/ped	foot
ptera	wing
siluri	a kind of fish
syn	with
tachy	swift
tetra	four
tri	three
ura	tail

K I N G D O M

PHYLUM

SUB-PHYLUM

Class

Order

Family

NOTE: If you would like to know the genus and species for a certain animal, you can find this information listed on the Wikipedia article about that animal (on the Internet).

K I N G D O M A N I M A L I A

**ROTIFERS** microscopic creatures such as philodina and rotaria

**NEMATODES** roundworms (includes hookworms, pinworms and vinegar eels)

**ANNELIDS** segmented worms such as the common earthworm

**PLATYHELMINTHES** flatworms such as the planaria and the fluke

**PORIFERA** sponges

**CNIDARIA** (also called **COELENTERATES**) jellyfish, hydra, sea anemones, corals

**CTENOPHORES** comb jelly

**ECHINODERMS** starfish, sand dollars, sea urchins, sea lilies, sea cucumbers

**MOLLUSKS**

**Cephalopods:** (means "head foot") octopus, squid, nautilus

**Gastropods:** (means "stomach foot") slug, snail, abalone, limpet, and others with one shell

**Pelecypods:** (means "hatchet foot") (also called "bi-valves") clam, oyster, mussel

**ARTHROPODS**

**Insects**

*Coleoptera:* beetles and weevils

*Dermaptera:* earwig

*Dictyoptera:* cockroach and mantis

*Diptera:* flies

*Hemiptera:* "true bugs" such as shield bug

*Hymenoptera:* ant, bee, hornet and wasp

*Isoptera:* termite

*Lepidoptera:* butterflies and moths

*Odonata:* dragonfly and damselfly

*Orthoptera:* grasshopper and cricket

*Siphonaptera:* flea

**Arachnids:** spiders, ticks, scorpions, harvestmen ("granddaddy long legs")

**Crustacea:** crab, lobster, water flea, daphnia, copepod

**Chilopoda:** centipedes

**Diplopoda:** millipedes

**CHORDATA**

**SUB-PHYLA**

**CEPHALOCHORDATA** the amphioxus (a strange form of sea life)

**TUNICATES** "sea squirts"

**VERTEBRATES** (see next page)

**PHYLUM**  
**SUB-PHYLUM**

**Class**

*Order*

Family

## VERTEBRATES

**Placoderms** (extinct fish)

### **Agnatha**

*Lamprey*

*Hagfish*

**Chondrichthyes** (cartilaginous fishes)

*Pleurotremata*: sharks

*Hypotremata*: rays, sawfish

**Osteoichthyes** (bony fishes)

*Anguilliformes*: conger eel, moray eel

*Atheriniformes*: flying fishes

*Cypriniformes*: goldfish, carp, piranha, minnow, electric eel

*Cyprinodontiformes*: black molly

*Gadiformes*: cod, whiting

*Gasterosteiformes*: seahorse, stickleback, leafy seadragon, pipefish

*Perciformes*: grouper, bass, mackerel, parrot fish, goby, angel fish, perch, wrasse, clownfish, remora, snapper, surgeonfish, bass, barracuda, cichlid

*Pleuronectiformes*: sole, halibut, turbot (flat fishes)

*Salmoniformes*: trout, salmon, viperfish

*Scorpaeniformes*: scorpionfish

*Siluriformes*: catfish

*Synbranchiformes*: swamp eel

*Tetraodontiformes*: blowfish, triggerfish, porcupine fish

### **Amphibia**

#### *Urodeles*

Salamandridae: salamanders and newts

#### *Anurans*

Ranidae: bull frog, green frog

Dendrobatidae: poison dart frog

Bufo: common toad

Pipidae: Surinam toad

Hylidae: European tree frog

Discoglossidae: firebelly frog

### **Reptilia**

*Squamata* (lizards and snakes)

*Sub-order "Sauria"* (lizards)

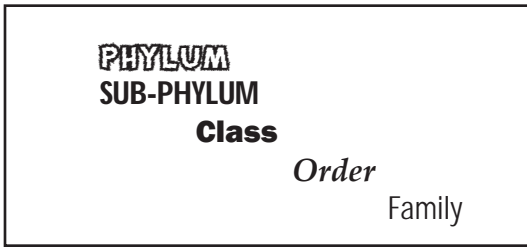
Geckonidae: gecko

Chamaeleonidae: chameleon

Iguanidae: iguana, lizards, anole

Helodermatidae: gila monster

Varanidae: monitor



**VERTEBRATES** (continued)

**Reptilia** (continued)

*Sub-order "Ophidia"* (snakes)

Colubridae: grass snake, rat snake, king snake, tree snake

Viperidae: viper, adder, asp

Crotalidae: rattlesnake moccasin, bushmaster

Boidae: boa, anaconda, python

Elapidae: spitting cobra, mamba, coral snake

Hydrophidae: sea snake

*Chelonia* (turtles)

Cheloniidae: sea turtle

Testudinidae: tortoise

Emydidae: painted turtle

Chelydridae: snapping turtle, box turtle

Trionychidae: soft-shelled turtle

*Crocodylia* (crocodiles and alligators)

Alligatoridae: alligator, cayman

Crocodylidae: crocodile

**Aves** (birds)

*Anseriformes*: duck, swan, goose

*Apterygiformes*: kiwi

*Charadriiformes*: gull, tern, puffin, sand piper

*Ciconiiformes*: stork, heron, bittern, ibis, spoonbill

*Columbiformes*: pigeon, dove

*Coraciiformes*: hornbill, kookabura

*Galliformes*: chicken, turkey, pheasant, quail

*Falconiformes*: hawk, falcon, vulture

*Passeriformes*: "perching birds" such as the blackbird, myna bird, and most common song birds we see every day

*Pelicaniformes*: pelican, gannet, cormorant

*Piciiformes*: toucan, woodpecker

*Procellariiformes*: petrel, albatross

*Psittaciformes*: "hookbills" such as the parrot, cockatiel and cockatoo

*Rheiformes*: rhea

*Sphenisciformes*: penguin

*Strigiformes*: owls

*Struthioniformes*: ostrich

**PHYLUM**  
**SUB-PHYLUM**

**Class**

*Order*

Family

## **Mammalia**

*Monotremes:* (egg-laying mammals) platypus, echidna

*Marsupials:* (have a pouch)

Phalangeidae: koala, dormouse, cuscus, brush-tail opossum

Peramelidae: bandicoot

Macropodidae: kangaroo, pademelon

Didelphidae: woolly opossum

Dasyuridae: dasyure, marsupial mouse

*Artiodactyls:* (hoofed mammals with even number of toes)

Antilocapridae: pronghorn

Peramelidae: antelope, gazelle, gnu, yak, goat, chamois, sheep, ibex, bison, eland, zebu, oryx, dik-dik, kudu, duiker

Camelidae: camel, llama, alpaca

Cervidae: muntjac, deer, moose, elk, caribou

Giraffidae: giraffe, okapi

Hippopotamidae: hippopotamus

Moschidae: musk deer

Suidae: forest hog, warthog, wild boar, pig

Tayassuidae: peccary

Tragulidae: chevrotain

*Carnivores* (meat-eaters)

Ailuropodidae: panda

Canidae: dog, fox, wolf

Felidae: all cats

Hyenidae: hyena, aardwolf

Mustelidae: weasel, badger, ferret, otter, mink, skunk, polecat

Procyonidae: coati, kinkajou, raccoon, lesser panda

Ursidae: bears

Vivereridae: mongoose, civet, genet, suricate, linsang

*Cetacea*

Delphinidae: orca ("killer whale"), dolphin

Balaenopteridae: baleen whales

*Chiroptera* ("hand-wings")

Megachiroptera: large bats such as flying fox, vampire bat, fruit bat

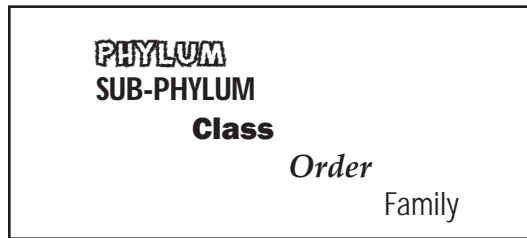
Microchiroptera: small, insect-eating bats such as brown bat

*Dermoptera:* flying lemur (not related to the true lemurs)

*Edentata*

Myrmecophagidae: giant anteater

Tachyglossidae: spiny anteater



**Mammalia** (continued)

*Hyracoidea*: hyrax

*Insectivores*: (insect-eating mammals)

Soricidae: pygmy shrew

Chrysochloridae: golden mole

Erinaceidae: hedgehog

Solenodontidae: otter shrew

Solenodontidae: solendon

*Lagomorphs*

Leporidae: rabbit

*Perissodactyls* (hoofed mammals with an odd number of toes)

Equidae: horse, donkey, zebra,

Tapiridae: tapir

Rhinocerotidae: rhinoceros

*Philodota*: pangolin

*Pinnipeds* ("wing-foots")

Otariidae: sea lion, fur seal

Phocidae: seal

Odobentidae: walrus

*Primates*

Ceropithecidae: baboon, macaque, pata, moustached monkey, Rhesus monkey

Lemuridae: lemurs

Daubentoniidae: aye-aye

Cebidae: squirrel monkey, spider monkey, saki, capuchin, howler monkey

Galagidae: bushbaby

Callithricidae: tamarin, marmoset

Hylobatidae: gibbon

Pongidae: orangutan, gorilla, chimpanzee

Colobidae: proboscis monkey

Tarsiidae: tarsier

Lorisidae: loris

Tupaiaidae: common tree shrew

*Proboscidea* (uses nose for feeding)

Elephantidae: elephant (and extinct mammoth)

*Rodents*

Cricetidae: hamster, gerbil, red-nosed mouse, lemming, vole

Sciuridae: squirrel, flying squirrel, prairie dog, marmot, woodchuck, chipmunk

Chinchillidae: chinchilla

Caviidae: guinea pig, mara (Patagonian hare)

**PHYLUM**  
**SUB-PHYLUM**

**Class**

*Order*

Family

***Rodents*** (continued)

Muridae: mouse, rat

Hydrochoeridae: capybara

Hystricidae: porcupine

Castoridae: beaver

Myomorpha: dormouse

Gliridae: hazel dormouse, golden dormouse

Erethizontidae: tree porcupine

Dasyproctidae: agouti

***Sirenia***

Trichechidae: manatee

Dugongidae: dugong

***Tubulidentata***

Orycteropidae: aardvark