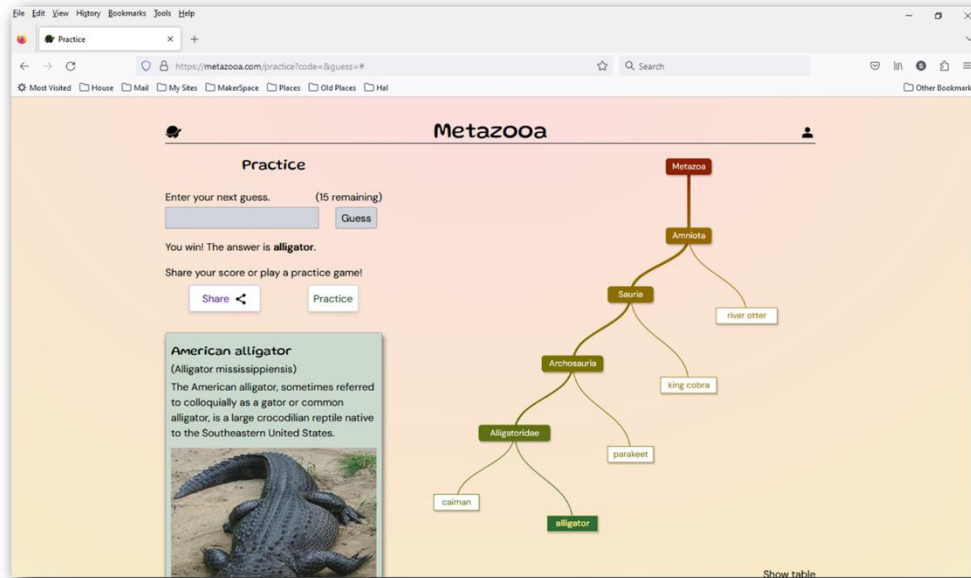


Metazooa Game Notes



Metazooa is a web based game (at <https://metazooa.com/>) that explored biological classification. It picks an animal and lets the user take guesses about what it is. After each guess the site shows how the picked animal relates to all the guessed ones.

The video at <https://youtube.com/???????> delivers a brief overview of the data the game uses, the NCBI data it is based on and an analysis of how best to play. This short document supports that video and can be found at <https://www.basingstokemakerspace.org.uk/wp-content/uploads/Metazooa.pdf>. It presents some of the data in a range of ways. The four sections provided are: *Species List*, *Hierarchy*, *Possible Games*; and a *Top Level Picture* showing the roots of the hierarchy.

Species List

This is a listing of all the 255 animals that Metazooa uses. Each one has been assigned to a specific NCBI species. The assignment to species is not critical since where animal names are ambiguous, they usually refer to closely related species that are nearby anyway.

The “Info” column shows the average number of bits of information that each guess would deliver if it were the first guess of the game. The “D” column is the depth below the “Metazooa” root node that this species is located at. Nodes have been removed to ensure every intermediate nodes has multiple children.

Hierarchy

This nested list shows the way that all the animals are grouped. The names of intermediate levels often vary from those used in the actual Metazooa game data. This is due to the arbitrary choices made when tidying up the hierarchy. This may be inconvenient for those wanting to use it to help play the game, but, it does not impact the analysis results at all. The text here has been formatted in order to make tracking the levels a bit easier. All nodes at a certain depth level below the root have the same formatting (colour, font size and style).

Possible Games

If the average information for each guess is recalculated every turn, then selecting the highest value will minimise the average game length. This complex calculation usually delivers a number of potential guesses with exactly the same score. Consistently selecting a particular guess from this “optimal set” means that there are only 255 possible games (one for each final answer). This section lists all of these games.



Species List

Mz Name	NCBI Species	Info	D
aardvark	aardvark	2.45	11
alligator	american alligator	2.52	12
alpaca	alpaca	3.10	14
anaconda	green anaconda	2.47	13
anemone	frilled sea anemone	0.14	3
anglerfish	anglerfish	1.58	10
anteater	giant anteater	2.46	12
antelope	roan antelope	3.19	15
arctic fox	arctic fox	3.27	16
armadillo	nine-banded armadillo	2.45	11
atlas moth	atlas moth	1.41	11
axolotl	axolotl	1.58	8
baboon	baboon	2.96	16
badger	eurasian badger	3.31	16
bald eagle	bald eagle	2.66	14
banana slug	pacific banana slug	1.08	6
barn owl	eastern barn owl	2.61	13
barnacle	barnacle	1.24	7
barracuda	europaean barracuda	1.57	10
bass	striped bass	1.58	10
beaver	american beaver	2.92	14
beluga whale	white whale	3.18	17
bigfin squid	bigfin reef squid	1.13	8
bison	bison	3.22	16
black bear	american black bear	3.26	16
black mamba	jameson's mamba	2.48	13
black widow	black widow	1.11	7
blackbird	eurasian blackbird	2.75	15
blue jay	blue jay	2.74	14
blue-ringed octopus	blue-ringed octopus	1.12	8
boa constrictor	boa	2.47	13
bobcat	bobcat	3.28	17
bonobo	bonobo	3.00	19
box turtle	common box turtle	2.46	11
brain coral	boulder brain coral	0.14	3
brown bear	grizzly bear	3.26	16
bullfrog	florida bog frog	1.58	8
bumble bee	white-tailed bumblebee	1.43	11
caiman	common caiman	2.52	12
camel	one-humped camel	3.10	14
canary	yellow-fronted canary	2.75	15
capuchin	pale-fronted capuchin	2.92	14
capybara	carpincho	2.95	15
caribou	caribou	3.20	16
carp	silver carp	1.51	8

Mz Name	NCBI Species	Info	D
carpenter ant	florida carpenter ant	1.43	11
cat	cats	3.27	16
catfish	white catfish	1.51	8
cattle	yattle	3.23	17
centipede	twenty-eight-leggedger	1.13	6
chameleon	meller's chameleon	2.42	11
cheetah	cheetah	3.24	15
chicken	chickens	2.71	15
chimpanzee	chimpanzee	3.00	19
chipmunk	eastern chipmunk	2.97	16
clownfish	clown anemonefish	1.57	10
cockatiel	cockatiel	2.67	14
cockatoo	yellow-crested cockatoo	2.67	14
cockroach	brown cockroach	1.39	11
cod	atlantic cod	1.53	8
condor	andean condor	2.65	13
coyote	coyote	3.27	16
cricket	variable field cricket	1.39	10
crocodile	african crocodile	2.51	11
crow	american crow	2.76	15
cuttlefish	common cuttlefish	1.13	8
deer	red deer	3.20	16
dolphin	long-beaked common dolphin	3.18	17
donkey	asiatic wild ass	2.90	14
dove	ring-necked dove	2.61	13
dragonfly	emperor dragonfly	1.27	8
duck	mandarin duck	2.70	14
dung beetle	flat african dung beetle	1.42	11
earthworm	earthworm	1.05	5
earwig	europaean earwig	1.36	9
echidna	long-beaked echidna	2.24	9
electric eel	electric knifefish	1.51	8
elephant	african savannah elephant	2.45	11
elk	wapiti	3.20	16
emperor penguin	emperor penguin	2.61	13
emu	emu	2.57	12
falcon	sooty falcon	2.61	13
finch	northern bullfinch	2.75	15
fire ant	red imported fire ant	1.43	11
firefly	genji firefly	1.41	10
flamingo	greater flamingo	2.59	12
flying squirrel	palawan flying squirrel	2.97	16
fruit bat	golden-capped fruit bat	2.85	13
fruit fly	fruit fly	1.41	11
gazelle	dorcas gazelle	3.19	15

Mz Name	NCBI Species	Info	D
gecko	cape dwarf gecko	2.38	9
gerbil	mongolian jird	2.97	16
giant octopus	north pacific giant octopus	1.12	8
giant panda	giant panda	3.25	15
giant squid	giant squid	1.13	8
gibbon	gibbon	2.97	16
gila monster	gila monster	2.42	11
giraffe	giraffe	3.15	14
goat	goats	3.21	16
goblin shark	goblin shark	1.15	7
goldfish	goldfish	1.51	8
goose	goose	2.71	15
gorilla	gorilla	2.99	18
grasshopper	american grasshopper	1.39	11
great white shark	white shark	1.15	7
grey parrot	african gray parrot	2.67	14
groundhog	woodchucks	2.97	16
guinea pig	guinea pig	2.95	15
guppy	swamp guppy	1.57	10
hammerhead shark	great hammerhead	1.15	7
hamster	syrian hamster	2.96	15
hawk	cuban hawk	2.66	14
hedgehog	europaean hedgehog	2.85	13
hercules beetle	hercules beetle	1.42	11
hermit crab	common hermit crab	1.28	10
hippopotamus	hippopotamus	3.13	14
honey bee	western honey bee	1.43	11
homet	europaean homet	1.43	11
horse	equine	2.90	14
house fly	house fly	1.41	11
human	human	2.99	18
humpback whale	humpback whale	3.15	15
huntsman spider	giant crab spider	1.11	7
hyena	spotted hyena	3.20	14
iguana	common iguana	2.42	11
jackal	golden jackal	3.27	16
jaquar	jaquar	3.27	16
jellyfish	moon jelly	0.13	2
kangaroo	kangaroo	2.40	11
kestrel	american kestrel	2.61	13
king cobra	king cobra	2.48	13
kiwi	little spotted kiwi	2.57	12
koala	koala	2.40	11
komodo dragon	komodowaran	2.42	11
krill	north pacific krill	1.27	9



Mz Name	NCBI Species	Info	D
ladybug	seven-spotted lady beetle	1.41	10
leech	medicinal leech	1.05	5
lemur	ring-tailed lemur	2.90	13
leopard	leopard	3.27	16
lion	lion	3.27	16
llama	llama	3.10	14
lobster	european lobster	1.28	10
locust	desert locust	1.39	11
lynx	eurasian lynx	3.28	17
macaque	japanese monkeys	2.96	16
macaroni penguin	macaroni penguin	2.61	13
macaw	hyacinth macaw	2.67	14
magpie	yellow-billed magpie	2.74	14
man o war	man o war	0.13	2
manatee	west indian manatee	2.45	11
mandrill	mandrill	2.96	16
manta ray	reef manta ray	1.13	6
mantis shrimp	mantis shrimp	1.25	8
mayfly	mayfly	1.27	8
meerkat	suricate	3.22	15
millipede	hothouse milliped	1.13	6
mink	mink	3.32	17
mockingbird	northern mockingbird	2.71	13
mole	european mole	2.85	13
monarch butterfly	american monarch	1.40	10
mongoose	egyptian mongoose	3.22	15
moose	moose	3.20	16
mosquito	mosquito	1.40	10
mouse	mouse	2.98	17
mussel	edible mussel	1.09	7
narwhal	narwhal	3.18	17
nautilus	bellybutton nautilus	1.10	6
nightingale	nightingale	2.74	14
ocelot	ocelot	3.27	16
opossum	southern opossum	2.38	10
orangutan	orangutan	2.98	17
orca	orca	3.18	17
ostrich	ostrich	2.57	12
oyster	pacific oyster	1.09	7
pangolin	sunda pangolin	2.82	12
parakeet	nanday parakeet	2.67	14
peacock	blue peafowl	2.71	15
pheasant	bulwer's pheasant	2.71	15
pig	wild boar	3.06	13
pigeon	new zealand pigeon	2.61	13
pillbug	common pillbug	1.25	8
piranha	red piranha	1.51	8
platypus	duckbill platypus	2.24	9
poison frog	red-and-black poison frog	1.59	9
polar bear	white bear	3.26	16
porcupine	cape porcupine	2.95	15

Mz Name	NCBI Species	Info	D
possum	golden ringtail possum	2.40	11
prawn	california bay shrimp	1.28	10
praying mantis	european mantid	1.39	10
pufferfish	guineafowl puffer	1.58	10
puffin	atlantic puffin	2.61	13
puma	puma	3.27	16
python	burmese python	2.46	12
rabbit	rabbits	2.90	13
raccoon	northern raccoon	3.28	15
rat	common thicket rat	2.98	17
rattlesnake	western diamondback rattlesnake	2.48	13
raven	rook	2.76	15
red fox	silver fox	3.27	16
red panda	red panda	3.28	15
rhinoceros	square-lipped rhinoceros	2.89	13
river otter	river otter	3.32	17
robin	robin	2.75	15
salamander	amber-colored salamander	1.58	8
salmon	atlantic salmon	1.52	8
sand dollar	sand dollar	0.98	6
scorpion	bark scorpion	1.09	5
sea clam	atlantic surf-clam	1.09	6
sea cucumber	deep water redfish	0.98	5
sea lion	california sealion	3.24	15
sea otter	sea otter	3.32	17
sea snake	yellow-bellied sea snake	2.47	12
sea turtle	leatherback sea turtle	2.46	11
sea urchin	green sea urchin	0.98	6
seagull	american herring gull	2.61	13
seahorse	tiger tail seahorse	1.55	9
seal	grey seal	3.24	15
sheep	wild sheep	3.21	16
silkworm	silkworm	1.41	11
skunk	striped skunk	3.28	15
snail	brown garden snail	1.08	6
snapping turtle	snapping turtle	2.46	11
snowy owl	snowy owl	2.61	13
sparrow	tree sparrow	2.74	14
sperm whale	sperm whale	3.16	16
squirrel	eastern gray squirrel	2.97	16
starfish	spiny starfish	0.96	4
stick bug	indian stick insect	1.36	9
sting ray	red stingray	1.13	6
swan	mute swan	2.71	15
swordfish	swordfish	1.57	10
tarantula	goliath tarantula	1.10	6
tasmanian devil	tasmanian devil	2.38	10

Mz Name	NCBI Species	Info	D
termite	formosan subterranean termite	1.39	11
tiger	tiger	3.27	16
tiger shark	tiger shark	1.15	7
toad	green toad	1.59	9
tortoise	charles island giant tortoise	2.46	11
toucan	red-billed toucan	2.59	12
trout	adriatic trout	1.52	8
tuna	tuna	1.55	9
turkey	wild turkey	2.70	14
two-toed sloth	southern two-toed sloth	2.46	12
vampire bat	vampire bat	2.85	13
viper	horned desert viper	2.48	13
vulture	cape vulture	2.66	14
walrus	walrus	3.24	15
wasp	common tiger-wasp	1.43	11
water buffalo	wild water buffalo	3.22	16
weasel	long-tailed weasel	3.32	17
wolf	grey wolf	3.27	16
wolverine	wolverine	3.31	16
wombat	coarse-haired wombat	2.40	11
yak	yak	3.23	17
zebra	mountain zebra	2.90	14



Hierarchy

This is the tree that was used in the analysis.

Metazoa

Cnidaria

- man o war
- jellyfish

Anthozoa

- brain coral
- anemone

Bilateria

Deuterostomia

Echinodermata

- starfish

Echinozoa

- sea cucumber

Echinoidea

- sea urchin
- sand dollar

Chordata

Chondrichthyes

Galeoidea

Carcharhiniformes

- hammerhead shark
- tiger shark

Lamniformes

- great white shark
- goblin shark

Myliobatiformes

- sting ray
- manta ray

Teleostomi

Actinopteri

Otomorpha

Cypriniformes

- goldfish
- carp

Characiphysae

- electric eel
- catfish
- piranha

Euteleosteomorpha

Salmoniformes

- salmon
- trout

Neoteleostei

- cod

Euacanthomorphacea

- tuna
- seahorse

Carangaria

- swordfish
- barracuda

Eupercaria

- anglerfish
- pufferfish
- bass

Ovalentaria

- guppy
- clownfish

Sarcopterygii

Amniota

Mammalia

Monotremata

- platypus
- echidna

Theria

Metatheria

- tasmanian devil
- opossum

Diprotodontia

- kangaroo
- possum
- koala
- wombat

Eutheria

Afrotheria

- manatee
- elephant
- armadillo

Xenarthra

- armadillo

Pilosa

- anteater
- two-toed sloth

Boreoeutheria

Euarchontoglires

Primates

- lemur

Haplorrhini

- capuchin

Catarrhini

Hominoidea

- gibbon
- orangutan

Hominidae

Homininae

- human
- gorilla

Pan

- chimpanzee
- bonobo

Cercopithecoidea

- macaque
- baboon
- mandrill

Glires

- rabbit

Rodentia

- beaver

Sciuridae

Sciurinae

- flying squirrel
- squirrel

Marmotini

- chipmunk
- groundhog

Hystricomorpha

- capybara
- porcupine
- guinea pig

Myomorpha

- hamster

Muridae

- gerbil

Murinae

- rat
- mouse

Laurasiatheria

pangolin

Carnivora

Caniformia

Canidae

Vulpes

- red fox

arctic fox

Canis

- jackal
- coyote
- wolf

Musteloidea

- raccoon
- skunk
- red panda

Mustelidae

- wolverine
- badger

Mustelinae

- weasel
- mink

Lutrinae

- river otter
- sea otter

Pinnipedia

- sea lion
- walrus
- seal

Ursidae

- giant panda

Ursus

- brown bear
- polar bear
- black bear

Feliformia

- hyena

Felidae

- cheetah

Panthera

- lion
- leopard
- tiger
- jaguar

Felinae

- cat
- ocelot
- puma

Lynx

- lynx
- bobcat

Herpestidae

- meerkat
- mongoose

Perissodactyla

- rhinoceros

Equidae

- zebra
- horse
- donkey

Eulipotyphla

- mole
- hedgehog

Chiroptera

- vampire bat
- fruit bat

Artiodactyla

- pig

Whippomorpha

hippopotamus

Cetacea

humpback whale

Odontoceti

sperm whale

Delphinidae

- dolphin
- orca

Monodontidae

- beluga whale
- narwhal

Camelidae

- llama
- camel
- alpaca

Ruminantia

- giraffe

Cervidae

Cervus

- deer
- elk

Odocoileinae

- moose
- caribou

Bovidae

- antelope
- gazelle

Bovinae

- water buffalo
- bison

Bos

- cattle
- yak

Caprinae

- sheep
- goat

Bilateria

Deuterostomia

Echinodermata

Teleostomi

Sarcopterygii

Amniota

Sauropsida

Lepidosauria

gecko

Unidentata

Serpentes

Henophidia

python

Boidae

boa constrictor

anaconda

Colubroidea

sea snake

Elapidae

black mamba

king cobra

Viperidae

viper

rattlesnake

Anguimorpha

gila monster

komodo dragon

Iguania

chameleon

iguana



- · · · · Archelosauria
- · · · · Archosauria
- · · · · Aves
- · · · · Palaeognathae
 - kiwi
 - emu
 - ostrich
- · · · · Neognathae
 - flamingo
 - toucan
- · · · · Charadriiformes
 - puffin
 - seagull
- · · · · Strigiformes
 - barn owl
 - snowy owl
- · · · · Galloanserae
- · · · · Anseriformes
 - duck
- · · · · Anserinae
 - goose
 - swan
- · · · · Galliformes
 - turkey
- · · · · Phasianinae
 - peacock
 - chicken
 - pheasant
- · · · · Psittaciformes
- · · · · Cacatuidae
 - cockatoo
 - cockatiel
- · · · · Psittacidae
 - macaw
 - parakeet
 - grey parrot
- · · · · Sphenisciformes
 - macaroni penguin
 - emperor penguin
- · · · · Accipitriformes
 - condor
- · · · · Accipitridae
 - hawk
 - vulture
 - bald eagle
- · · · · Passeriformes
 - mockingbird
- · · · · Passeroidea
 - sparrow
- · · · · Fringillidae
 - finch
 - canary
- · · · · Turdidae
 - nightingale
- · · · · Turdus
 - robin
 - blackbird
- · · · · Corvidae
 - magpie
 - blue jay
- · · · · Corvus
 - crow
 - raven
- · · · · Falconiformes
 - kestrel
 - falcon
- · · · · Columbiformes
 - dove
 - pigeon

- · · · · Crocodylia
 - crocodile
- · · · · Alligatoridae
 - alligator
 - caiman
- · · · · Testudines
- · · · · Testudinoidea
 - box turtle
 - tortoise
- · · · · Americhelydia
 - sea turtle
 - snapping turtle

Bilateria

- Deuterostomia
- Chordata
- Teleostomi
- Sarcopterygii
- Amphibia
- Caudata
 - axolotl
 - salamander
- Anura
 - bullfrog
- Hyloidea
 - toad
 - poison frog

- Protostomia
- Arthropoda
- Arachnida
 - scorpion
- Araneae
 - tarantula
- Araneomorphae
 - huntsman spider
 - black widow
- Mandibulata
- Pancrustacea
- Insecta
- Palaeoptera
 - dragonfly
 - mayfly
- Neoptera
- Polyneoptera
 - stick bug
 - earwig
- Dictyoptera
 - praying mantis
- Blattodea
 - cockroach
 - termite
- Orthoptera
 - cricket
- Acrididae
 - locust
 - grasshopper
- Endopterygota
- Coleoptera
 - firefly
 - ladybug
- Scarabaeidae
 - dung beetle
 - hercules beetle
- Diptera
 - mosquito
- Brachycera
 - fruit fly
 - house fly
- Lepidoptera
 - monarch butterfly
- Bombycoidea
 - atlas moth
 - silkworm
- Hymenoptera
- Apidae
 - bumble bee
 - honey bee
- Formicidae
 - carpenter ant
 - fire ant
- Vespidae
 - hornet
 - wasp
- Crustacea
 - barnacle
- Malacostraca
 - mantis shrimp
 - pillbug
- Eucarida
 - krill
- Decapoda
 - lobster
 - prawn
 - hermit crab

- Myriapoda
 - centipede
 - millipede
- Spiralia
- Annelida
 - leech
 - earthworm
- Mollusca
 - snail
 - banana slug
- Bivalvia
 - sea clam
- Pteriomorpha
 - mussel
 - oyster
- Cephalopoda
 - nautilus
- Coleoidea
- Octopoda
 - blue-ringed octopus
 - giant octopus
- Decapodiformes
 - giant squid
 - cuttlefish
 - bigfin squid



Possible Games

List of all the possible games, assuming that each guess is one of the candidates with the highest average information at that point.

weasel
weasel, anglerfish
weasel, anglerfish, clownfish
weasel, anglerfish, clownfish, barracuda
weasel, anglerfish, clownfish, barracuda, seahorse
weasel, anglerfish, clownfish, barracuda, seahorse, tuna
weasel, anglerfish, clownfish, barracuda, swordfish
weasel, anglerfish, clownfish, guppy
weasel, anglerfish, cod
weasel, anglerfish, electric eel
weasel, anglerfish, electric eel, carp
weasel, anglerfish, electric eel, carp, goldfish
weasel, anglerfish, electric eel, catfish
weasel, anglerfish, electric eel, catfish, piranha
weasel, anglerfish, pufferfish
weasel, anglerfish, pufferfish, bass
weasel, anglerfish, salmon
weasel, anglerfish, salmon, trout
weasel, anteater
weasel, anteater, armadillo
weasel, anteater, elephant
weasel, anteater, elephant, aardvark
weasel, anteater, elephant, aardvark, manatee
weasel, anteater, two-toed sloth
weasel, bobcat
weasel, bobcat, lion
weasel, bobcat, lion, cheetah
weasel, bobcat, lion, jaguar
weasel, bobcat, lion, jaguar, leopard
weasel, bobcat, lion, jaguar, leopard, tiger
weasel, bobcat, lynx
weasel, bobcat, meerkat
weasel, bobcat, meerkat, hyena
weasel, bobcat, meerkat, mongoose
weasel, bobcat, ocelot
weasel, bobcat, ocelot, cat
weasel, bobcat, ocelot, cat, puma
weasel, brain coral
weasel, brain coral, anemone
weasel, brain coral, jellyfish
weasel, brain coral, jellyfish, man o war
weasel, chimpanzee
weasel, chimpanzee, bonobo
weasel, chimpanzee, capuchin
weasel, chimpanzee, gibbon
weasel, chimpanzee, human
weasel, chimpanzee, human, gorilla
weasel, chimpanzee, lemur
weasel, chimpanzee, mandrill
weasel, chimpanzee, mandrill, baboon
weasel, chimpanzee, mandrill, baboon, macaque
weasel, chimpanzee, mouse
weasel, chimpanzee, mouse, gerbil
weasel, chimpanzee, mouse, groundhog
weasel, chimpanzee, mouse, groundhog, chipmunk
weasel, chimpanzee, mouse, groundhog, flying squirrel
weasel, chimpanzee, mouse, groundhog, flying squirrel, squirrel
weasel, chimpanzee, mouse, groundhog, porcupine
weasel, chimpanzee, mouse, groundhog, porcupine, beaver
weasel, chimpanzee, mouse, groundhog, porcupine, capybara
weasel, chimpanzee, mouse, groundhog, porcupine, capybara, guinea pig

weasel, chimpanzee, mouse, hamster
weasel, chimpanzee, mouse, rabbit
weasel, chimpanzee, mouse, rat
weasel, chimpanzee, orangutan
weasel, crow
weasel, crow, alligator
weasel, crow, alligator, caiman
weasel, crow, alligator, crocodile
weasel, crow, chicken
weasel, crow, chicken, parakeet
weasel, crow, chicken, parakeet, cockatiel
weasel, crow, chicken, parakeet, cockatoo
weasel, crow, chicken, parakeet, hawk
weasel, crow, chicken, parakeet, hawk, bald eagle
weasel, crow, chicken, parakeet, hawk, vulture
weasel, crow, chicken, parakeet, hawk, condor
weasel, crow, chicken, parakeet, hawk, emperor penguin
weasel, crow, chicken, parakeet, hawk, emperor penguin, dove
weasel, crow, chicken, parakeet, hawk, emperor penguin, dove, pigeon
weasel, crow, chicken, parakeet, hawk, emperor penguin, dove, puffin
weasel, crow, chicken, parakeet, hawk, emperor penguin, dove, puffin, falcon, kestrel
weasel, crow, chicken, parakeet, hawk, emperor penguin, dove, puffin, falcon, snowy owl, barn owl
weasel, crow, chicken, parakeet, hawk, emperor penguin, dove, puffin, falcon, snowy owl, toucan, flamingo
weasel, crow, chicken, parakeet, hawk, emperor penguin, dove, puffin, falcon, snowy owl, toucan
weasel, crow, chicken, parakeet, hawk, emperor penguin, dove, puffin, falcon, snowy owl
weasel, crow, chicken, parakeet, hawk, emperor penguin, dove, puffin, falcon
weasel, crow, chicken, parakeet, hawk, emperor penguin, dove, puffin, seagull
weasel, crow, chicken, parakeet, hawk, emperor penguin, macaroni penguin
weasel, crow, chicken, parakeet, macaw
weasel, crow, chicken, parakeet, macaw, grey parrot
weasel, crow, chicken, pheasant
weasel, crow, chicken, pheasant, peacock
weasel, crow, chicken, swan
weasel, crow, chicken, swan, duck
weasel, crow, chicken, swan, goose
weasel, crow, chicken, turkey
weasel, crow, emu
weasel, crow, emu, ostrich
weasel, crow, emu, ostrich, kiwi
weasel, crow, finch
weasel, crow, finch, canary
weasel, crow, finch, robin
weasel, crow, finch, robin, blackbird
weasel, crow, finch, robin, mockingbird
weasel, crow, finch, robin, nightingale
weasel, crow, finch, sparrow
weasel, crow, magpie
weasel, crow, magpie, blue jay
weasel, crow, raven
weasel, crow, sea turtle
weasel, crow, sea turtle
weasel, crow, sea turtle, snapping turtle
weasel, crow, sea turtle, tortoise
weasel, crow, sea turtle, tortoise, box turtle
weasel, crow, viper
weasel, crow, viper, anaconda
weasel, crow, viper, anaconda, boa constrictor
weasel, crow, viper, anaconda, python
weasel, crow, viper, black mamba
weasel, crow, viper, black mamba, king cobra
weasel, crow, viper, black mamba, sea snake
weasel, crow, viper, gecko



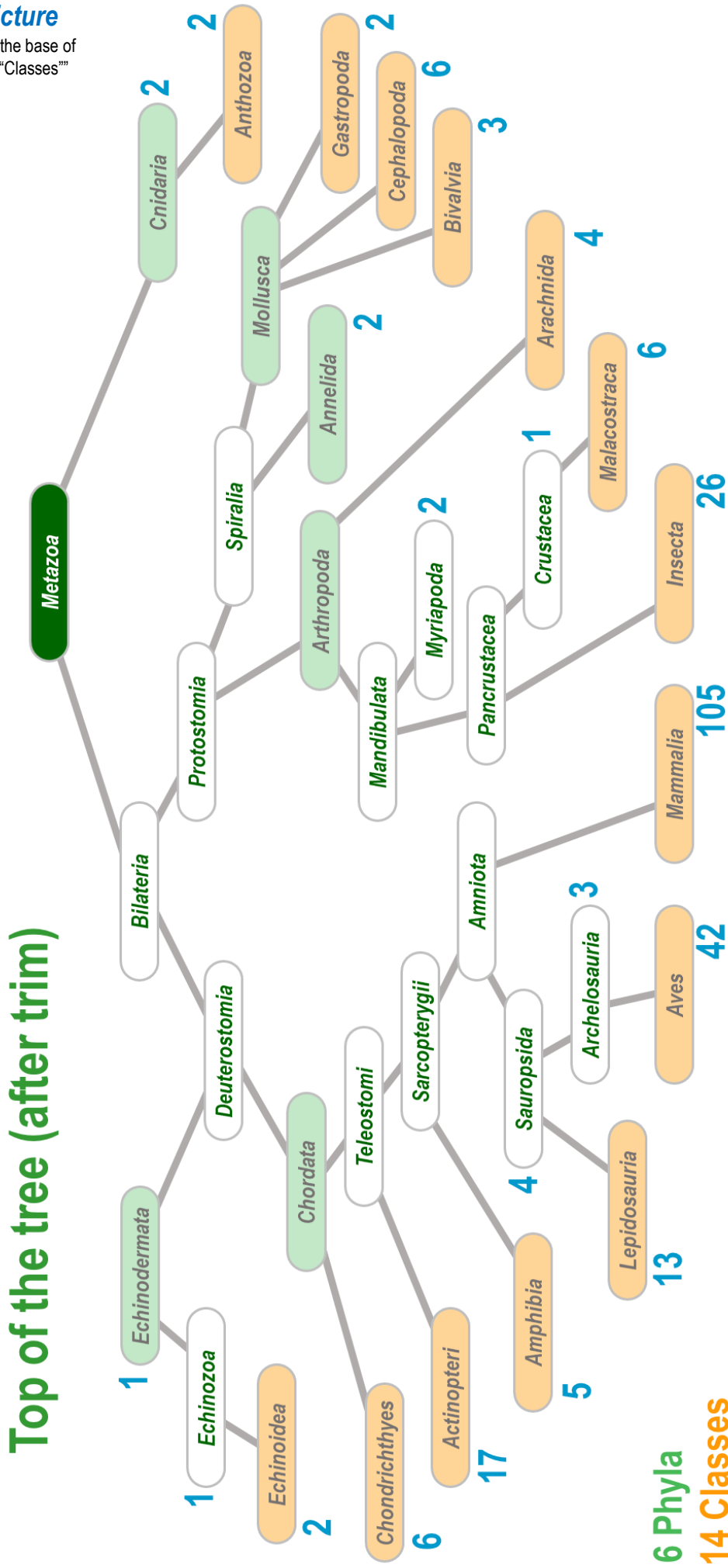
weasel, crow, viper, iguana
weasel, crow, viper, iguana, chameleon
weasel, crow, viper, iguana, komodo dragon
weasel, crow, viper, iguana, komodo dragon, gila monster
weasel, crow, viper, rattlesnake
weasel, echidna
weasel, echidna, platypus
weasel, goblin shark
weasel, goblin shark, great white shark
weasel, goblin shark, hammerhead shark
weasel, goblin shark, hammerhead shark, tiger shark
weasel, goblin shark, sting ray
weasel, goblin shark, sting ray, manta ray
weasel, honey bee
weasel, honey bee, bumble bee
weasel, honey bee, carpenter ant
weasel, honey bee, carpenter ant, fire ant
weasel, honey bee, carpenter ant, wasp
weasel, honey bee, carpenter ant, wasp, hornet
weasel, honey bee, cockroach
weasel, honey bee, cockroach, locust
weasel, honey bee, cockroach, locust, cricket
weasel, honey bee, cockroach, locust, earwig
weasel, honey bee, cockroach, locust, earwig, stick bug
weasel, honey bee, cockroach, locust, grasshopper
weasel, honey bee, cockroach, praying mantis
weasel, honey bee, cockroach, termite
weasel, honey bee, dragonfly
weasel, honey bee, dragonfly, mayfly
weasel, honey bee, giant squid
weasel, honey bee, giant squid, cuttlefish
weasel, honey bee, giant squid, cuttlefish, bigfin squid
weasel, honey bee, giant squid, earthworm
weasel, honey bee, giant squid, earthworm, leech
weasel, honey bee, giant squid, giant octopus
weasel, honey bee, giant squid, giant octopus, blue-ringed octopus
weasel, honey bee, giant squid, nautilus
weasel, honey bee, giant squid, oyster
weasel, honey bee, giant squid, oyster, banana slug
weasel, honey bee, giant squid, oyster, banana slug, snail
weasel, honey bee, giant squid, oyster, mussel
weasel, honey bee, giant squid, oyster, sea clam
weasel, honey bee, hercules beetle
weasel, honey bee, hercules beetle, dung beetle
weasel, honey bee, hercules beetle, fruit fly
weasel, honey bee, hercules beetle, fruit fly, atlas moth
weasel, honey bee, hercules beetle, fruit fly, atlas moth, monarch butterfly
weasel, honey bee, hercules beetle, fruit fly, atlas moth, silkworm
weasel, honey bee, hercules beetle, fruit fly, house fly
weasel, honey bee, hercules beetle, fruit fly, mosquito
weasel, honey bee, hercules beetle, ladybug
weasel, honey bee, hercules beetle, ladybug, firefly
weasel, honey bee, hermit crab
weasel, honey bee, hermit crab, barnacle
weasel, honey bee, hermit crab, krill
weasel, honey bee, hermit crab, pillbug
weasel, honey bee, hermit crab, pillbug, mantis shrimp
weasel, honey bee, hermit crab, prawn
weasel, honey bee, hermit crab, prawn, lobster
weasel, honey bee, huntsman spider
weasel, honey bee, huntsman spider, black widow
weasel, honey bee, huntsman spider, scorpion
weasel, honey bee, huntsman spider, tarantula
weasel, honey bee, millipede
weasel, honey bee, millipede, centipede
weasel, mink
weasel, poison frog

weasel, poison frog, axolotl
weasel, poison frog, axolotl, salamander
weasel, poison frog, bullfrog
weasel, poison frog, toad
weasel, possum
weasel, possum, koala
weasel, possum, koala, kangaroo
weasel, possum, koala, kangaroo, wombat
weasel, possum, opossum
weasel, possum, opossum, tasmanian devil
weasel, red panda
weasel, red panda, skunk
weasel, red panda, skunk, raccoon
weasel, river otter
weasel, river otter, badger
weasel, river otter, badger, wolverine
weasel, river otter, sea otter
weasel, sea urchin
weasel, sea urchin, sand dollar
weasel, sea urchin, sea cucumber
weasel, sea urchin, starfish
weasel, wolf
weasel, wolf, arctic fox
weasel, wolf, arctic fox, red fox
weasel, wolf, brown bear
weasel, wolf, brown bear, giant panda
weasel, wolf, brown bear, polar bear
weasel, wolf, brown bear, polar bear, black bear
weasel, wolf, brown bear, sea lion
weasel, wolf, brown bear, sea lion, walrus
weasel, wolf, brown bear, sea lion, walrus, seal
weasel, wolf, coyote
weasel, wolf, coyote, jackal
weasel, yak
weasel, yak, beluga whale
weasel, yak, beluga whale, camel
weasel, yak, beluga whale, camel, alpaca
weasel, yak, beluga whale, camel, alpaca, llama
weasel, yak, beluga whale, camel, pig
weasel, yak, beluga whale, dolphin
weasel, yak, beluga whale, dolphin, orca
weasel, yak, beluga whale, dolphin, sperm whale
weasel, yak, beluga whale, hippopotamus
weasel, yak, beluga whale, humpback whale
weasel, yak, beluga whale, narwhal
weasel, yak, cattle
weasel, yak, donkey
weasel, yak, donkey, hedgehog
weasel, yak, donkey, hedgehog, fruit bat
weasel, yak, donkey, hedgehog, fruit bat, pangolin
weasel, yak, donkey, hedgehog, fruit bat, vampire bat
weasel, yak, donkey, hedgehog, mole
weasel, yak, donkey, rhinoceros
weasel, yak, donkey, zebra
weasel, yak, donkey, zebra, horse
weasel, yak, elk
weasel, yak, elk, deer
weasel, yak, elk, giraffe
weasel, yak, elk, moose
weasel, yak, elk, moose, caribou
weasel, yak, sheep
weasel, yak, sheep, gazelle
weasel, yak, sheep, gazelle, antelope
weasel, yak, sheep, goat
weasel, yak, water buffalo
weasel, yak, water buffalo, bison



Top Level Picture

This diagram shows the base of the tree down to the "Classes"



6 Phyla

14 Classes

183 Clades

255 Species

