

Classification Information Sheet

Biologists have sorted living things into groups. Sorting into groups is called classifying. Each group has been given a name, which tells us something about the group.

It is useful to have organisms classified into named groups because it makes it easy for everyone in the world to identify unknown things, and to determine their uses and whether they are harmful to us.

Features used in classification

Features such as colour, size and where the organism lives are not very important in classifying. The following features are used to classify animals:

- type of cells
- type of body covering
- type of skeleton
- method of reproduction
- movement

Levels of Classification

All living things are classified into five kingdoms: Monera, Protista, Fungi, Plants and Animals.

Each of these kingdoms is subdivided into smaller and smaller groups called phylum, sub-phylum, class, order, family, genus and species.

A species is the smallest group of organisms that look similar to each other and can interbreed to produce fertile offspring (i.e. offspring that can reproduce). Domestic cats belong to one species because they can interbreed and have kittens. When a tiger and lion interbreed a hybrid animal called a liger or a tigon is produced. Hybrid animals are infertile and cannot reproduce.

How a domestic cat and human are classified

Classification level	domestic cat	human
Kingdom	Animalia	Animalia
Phylum	Chordata	Chordata
Sub-phylum	Vertebrata	Vertebrata
Class	Mammalia	Mammalia
Order	Carnivora	Primate
Family	Felidae	Homonidae
Genus	<i>Felis</i>	<i>Homo</i>
Species	<i>cattus</i>	<i>sapiens</i>

Binomial Names

Every living thing is given its own two-word name. This *is* called its binomial name or scientific name, which is in Latin. The first word is the name of the bigger group called genus.

A genus is a group of closely related species. The genus name starts with a capital letter. The second word is the species name and it does not have a capital letter. The binomial name for the household cat is *Felis catus*, and a dog is Cam's *familiaris*, and a human is *Homo sapiens*. Notice the binomial name is always written in italics (sloping letters). Domestic cats belong to one species because they can interbreed. Within the domestic cats there are many types, called breeds, such as Burmese, Siamese, Manx and Chinchilla.



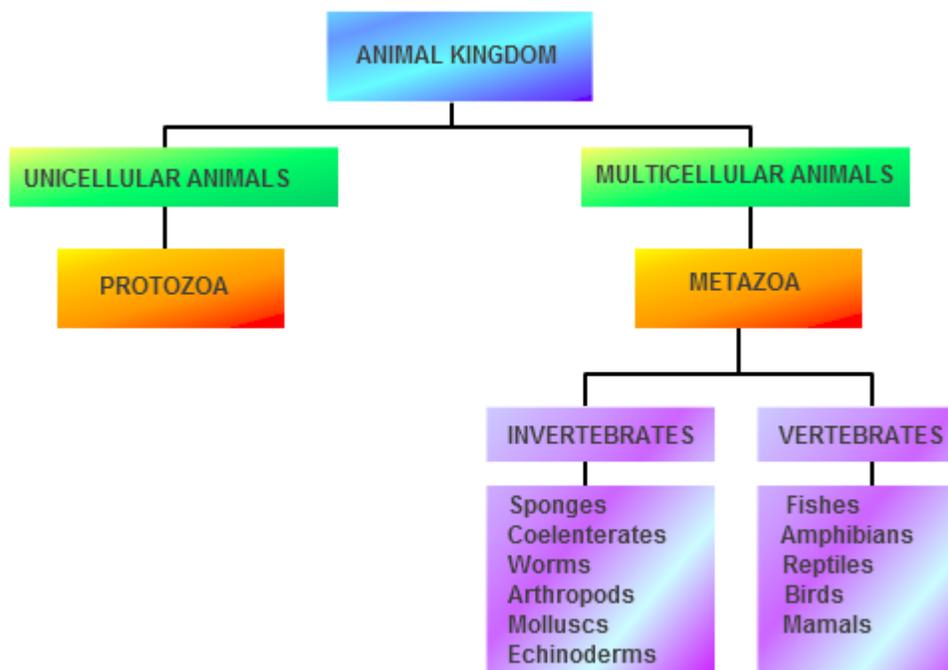
Fewer characteristics in common



More characteristics in common

Kingdom Animalia

All organisms in this kingdom are multicellular. Each cell stores its genetic material in a nucleus but doesn't have a cell wall. Animals gain energy from other living things. We belong in this kingdom.



Vertebrate Classification

Animals are classified into two principal groups ***invertebrates*** (with-out backbone) and ***vertebrates*** (with backbone). Backbone is the observable feature which defines whether the animal is vertebrate or invertebrate.

Vertebrates are the most organized organisms on Earth. They belong to the sub-phylum Vertebrata. They are not the most numerous group of animals, they are the most advanced group of animals. The characteristics that makes vertebrates special are the presence of the spinal cords, vertebrae and notochords.



REPTILES

Have dry scaly skin, lay eggs on land and are cold-blooded.



BIRDS

Have feathers, wings and beaks, lay eggs and are warm-blooded.



FISH

Have scales on their bodies, have gills for breathing and are cold-blooded.



MAMMALS

Have fur or hair, feed their young on milk and are warm-blooded.



AMPHIBIANS

Have moist, slimy skin, lay their eggs in water and are cold-blooded.



**Reptile
Encounters**
wildlife up close

reptileencounters.com.au

