

Classifying Critters

In the 1700s, a man by the name of **Carl Linnaeus** began putting living things into groups based on similarities and devised a system of naming and classifying organisms that is still in use today (with many changes). He is often called the **Father of Taxonomy** because of his contributions to this area of biology. Linnaeus developed the use of **binomial nomenclature** for naming organisms. Linnaeus assigned binomial names to over 11,000 species of plants and animals.

In this system, each organism has two names: a **genus** and a **species**. In order for an organism to be specifically identified, it must have both a genus and species name. This is a universal system, so no matter what area of the world you are in the **scientific name** of an organism is the same. This reduces confusion about common names. For example, the same animal is known by the common name of cougar, mountain lion, and puma; but the scientific name is *Puma concolor*. Each organism has only one scientific name consisting of a genus and species. When writing these names the genus is always capitalized and the species is always lowercase. The whole scientific name should be italicized or underlined.

In addition to naming organisms, another important part of taxonomy is putting them into groups. Classification groupings are based on how similar organisms are to each other. A new taxonomic category and the very broadest grouping is called a **domain**. The groupings below domain from most broad to most specific are: **kingdom, phylum, class, order, family, genus, and species**. The example below shows the entire classification of a leopard. The scientific name for a leopard is *Panthera pardus*.

Domain: Eukarya
Kingdom: Animalia
Phylum: Chordata
Class: Mammalia
Order: Carnivora
Family: Felidae
Genus: *Panthera*
Species: *Panthera pardus* (a species name always includes the genus too)

In order for two animals to be members of the same genus, they must be closely related. For example, the Genus *Panthera* includes the leopard and the African lion and tiger.

Today, as new unique species are found and named, the same basic ideas that Linnaeus had are still used. New organisms are given scientific names and put into groups with other organisms like them. Every organism that is known to man has been given a domain, kingdom, phylum, class, order, family, genus, and species identification.

Name _____

Date _____

Classifying Critters Questions

1. True or False. Carl Linnaeus is known as the Father of Taxonomy.
2. Binomial nomenclature gives every organism a genus and a _____ name.
3. The scientific name for a wolf is *Canis lupus*. Which part of the name is the genus?
4. Which of the following is a correctly written scientific name?
 - a. Loxodonta Africana
 - b. loxodonta africana
 - c. *Loxodonta africana*
 - d. *Loxodonta Africana*
5. What is the very broadest taxonomic category?
 - a. species
 - b. domain
 - c. family
 - d. order
6. Fill in the blanks in order: Kingdom, _____, Class, Order, _____, Genus, _____.
7. What class do leopards belong to?
8. Animalia is the _____ designation for the leopard.
 - a. kingdom
 - b. domain
 - c. species
 - d. order
9. Linnaeus gave humans the scientific name *Homo sapiens*. What genus do humans belong to?
10. An African lion is called a *Panthera leo*. A tiger is the *Panthera tigris*. These two animals belong to the same _____ but are different _____.

Name _____

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Classifying Critters Answers

1. **True**
2. **species**
3. ***Canis***
4. Which of the following is a correctly written scientific name?
 - a. Loxodonta Africana
 - b. loxodonta africana
 - c. *Loxodonta africana***
 - d. *Loxodonta Africana*
5. What is the very broadest taxonomic category?
 - a. species
 - b. domain**
 - c. family
 - d. order
6. Fill in the blanks in order: Kingdom, **Phylum**, Class, Order, **Family**, Genus, **Species**.
7. **Mammalia**
8. Animalia is the _____ designation for the leopard.
 - a. kingdom**
 - b. domain
 - c. species
 - d. order
9. ***Homo***
10. An African lion is called a *Panthera leo*. A tiger is the *Panthera tigris*. These two animals belong to the same **genus** but are different **species**.