Animal Classification

[1] When we go to a bookstore, we see thousands of books neatly arranged first by subjects (such as novels, memoirs, comics, and history) and then by the alphabetical order of authors' last names. Since all the books are put away in a methodical order, it is easy for us to look up a book that we are interested in.

[2] Scientists use a similar approach to categorize all the animals that have ever lived on Earth. By observing each animal's anatomy and behaviors, scientists are able to identify animals of comparable traits and group them together. From there, scientists make further distinctions among animals of a given group and break the group into many smaller groups. Scientists continue this process until they can dissect the group no more.

[3] If we are to draw out a diagram to demonstrate scientists' methodology, we will construct a multi-level classification system. The rule of the thumb is this: the higher a level is in the animal classification scheme, the more animals it has. Let's look at the table below to see how many levels the animal classification system has and how scientists classify giraffes.

[4]

Levels (from the highest to the lowest)	Example
Kingdom	Kingdom Animalia is the broadest category of all in the animal classification system. It includes every animal.
Phylum (plural: Phyla)	Phylum Chordata includes all animals of the Kingdom Animalia that have spinal cords.
Class	Class Mammalia includes all warm-blooded animals of the Phylum Chordata that have hair and feed their young with milk.
Order	Order Artiodactyla includes all animals of the Class Mammalia that have an even number of toes in their hooves.
Family	Family Giraffidae includes all animals of the Order Artiodactyla that have long legs, a long narrow head with small horns, thin lips, and long tongues.
Genus (plural: Genera)	Genus Okapia and Genus Giraffa
Species	Species Camelopardalis, also known as giraffes in English.

[5] As you go through the example above, you must have a hard time pronouncing the italicized words (such as Animalia and Artiodactyla). Well, just in case you wonder if you are reading English, you really are not! These italicized words, in either Greek or Latin, are the scientific names that scientists use in their animal classification system. Why do they give animals scientific names? Well, with over 6,000 languages in the world, scientists from any two countries may name the same animal differently. For instance, while we are very excited to see "giraffes", children in China are very excited to see "long neck deer". To avoid confusion, scientists all over the world use animals' scientific names. Hence, in the case of giraffes, scientists from both China and the United States call them Giraffa camelopardalis.

The first part of the name is giraffes' genus name, and it always begins with a capital letter. The second part of the name is giraffes' species name, and it always begins with a lower case.

6 The history of the animal classification system can be traced back to the 18th century. Carl Linnaeus, a Swedish botanist, established taxonomy, the science of identifying, classifying, and naming all the organisms. Due to his hard work as well as other taxonomists' painstaking efforts, we have a well-structured classification system for not only animals, but also other living things on Earth.

Name _____ Science Pd: _____

Animal Classification

1. How many levels does the animal classification system have?
   - (A) Three
   - (B) Four
   - (C) Ten
   - (D) Seven

2. Taxonomy is the science of identifying, classifying, and naming all the living things.
   - (A) False
   - (B) True

3. Which of the following animal classification levels contains the LEAST number of animals?
   - (A) Family
   - (B) Genus
   - (C) Order
   - (D) Kingdom

4. Which of the following animal classification levels contains the MOST number of animals?
   - (A) Family
   - (B) Class
   - (C) Order
   - (D) Species

5. Which of the following about the animal classification system is correct?
   - (A) Scientific names used in the animal classification system are in either German or Latin.
   - (B) Carl Linnaeus, a Swiss botanist, was the driving force behind the animal classification system.
   - (C) A Class contains more animals than a Family.
   - (D) Phylum Mammalia includes all animals that have hair and an even number of toes in their hooves.

6. Which of the following TWO animal classification levels do scientists use when they refer to an animal? (Please choose two of the best answers.)
   - (A) Species
   - (B) Phylum
   - (C) Family
   - (D) Genus

7. The giant panda's species name is Melanoleuca and its genus name is Ailuropoda. How do scientists all over the world refer to the giant panda?
   - (A) Melanoleuca Ailuropoda
   - (B) Ailuropoda Melanoleuca
   - (C) Melanoleuca ailuropoda
   - (D) Ailuropoda melanoleuca

8. The lower a level is in the animal classification system, the more animals it has.
   - (A) False
   - (B) True