Name _____   Date _____

Warm-Up: Animal Classification

[1] When we go to a bookstore, we see thousands of books neatly arranged. First, they are grouped by subjects. We see labels such as novels, memoirs, comics, and history. Within each of those groups, the books are shelved in alphabetical order of authors' last names. Since all the books are kept in a logical order, it is easy for us to find a book that interests us.

[2] Just as with books, scientists use a similar approach to categorize all the animals that have ever lived on Earth. They look at each animal's anatomy and behaviors. Then scientists identify animals with similar traits and group them together. From there, scientists make further distinctions among animals of a given group. Larger groups are divided into many smaller groups. Scientists continue this process until they can dissect the group no more.

[3] A diagram of this shows a multi-level classification system. The higher a level is in the animal classification scheme, the more animals it has. Let's look at the table below. Notice how many levels the animal classification system has. The table shows 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 may have a hard time pronouncing some of the words (such as *Animalia* and *Artiodactyla*). Well, just in case you wonder if you are reading English, you really are not! These 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 letter.

[6] The history of this classification system can be traced back to the 18th century. Carl von Linné was a Swedish botanist. He set up this system, called taxonomy. Taxonomy is the science of identifying, classifying, and naming all living things. He even gave himself a scientific name: Carolus Linnaeus!

[7] 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 all other living things on Earth.

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

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

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

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

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

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