

CHAPTER 17 ACTIVE READING WORKSHEETS

CLASSIFICATION OF ORGANISMS

Section 17-1: Biodiversity

Read the passage below, which covers topics from your textbook.
Answer the questions that follow.

Linnaeus divided a nested hierarchy of seven different levels of organization. Linnaeus's largest category is called a **kingdom**. There are two kingdoms, plant and animal, which are the same as Aristotle's main categories. Each subset within a kingdom is known as a **phylum**, in the animal kingdom, or a **division**, in the plant kingdom. Within a phylum or division, each subset is called a **class**, and each subset within a class is called an **order**. Still smaller groupings are the **family** and the **genus**. The smallest grouping of all, which contains only a single organism type, is known as the **species**.

In Linnaeus's system, the species name (also called the scientific name) of an organism has two parts. The first part of the name is the genus, and the second part is the *species identifier*, usually a descriptive word. Thus, we humans are known by our genus, *Homo*, and by our species identifier, *sapiens*. This system of two-part names is known as **binomial nomenclature**.

Read each question and write your answer in the space provided.

SKILL: Forming Analogies

An analogy identifies a similar relationship between different pairs of items.

1. Complete the following analogy: "Plant is to division as animal is to _____."
2. Complete the following analogy: "*Homo* is to genus as *sapiens* is to _____."

Circle the letter of the word that best completes the analogy.

3. Class is to order as order is to
 - a. division.
 - b. family.
 - c. kingdom.
 - d. phylum.

SECTION 17-1 REVIEW

BIODIVERSITY

VOCABULARY REVIEW Distinguish between the terms in each of the following pairs of terms.

1. taxonomy, taxon _____

2. kingdom, species _____

3. phylum, division _____

4. species name, species identifier _____

5. species, subspecies _____

MULTIPLE CHOICE Write the correct letter in the blank.

- _____ 1. Aristotle classified animals on the basis of

a. their size.	c. where they lived.
b. their evolutionary history.	d. what they ate.
- _____ 2. The main criterion used in Linnaeus's system of classification is an organism's

a. evolutionary history.	c. taxonomy.
b. morphology.	d. hierarchy.
- _____ 3. Each subset within a class of organisms is called a(n)

a. order.	b. family.	c. genus.	d. phylum.
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- _____ 4. In the scientific name of an organism, the first part is the

a. species identifier.	b. variety.	c. subspecies.	d. genus.
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- _____ 5. The species name of the pangolin is

a. <i>Manis temminckii</i> .	c. <i>Manis temminckii</i> .
b. <i>manis temminckii</i> .	d. <i>Manis Temminckii</i> .

SHORT ANSWER Answer the questions in the space provided.

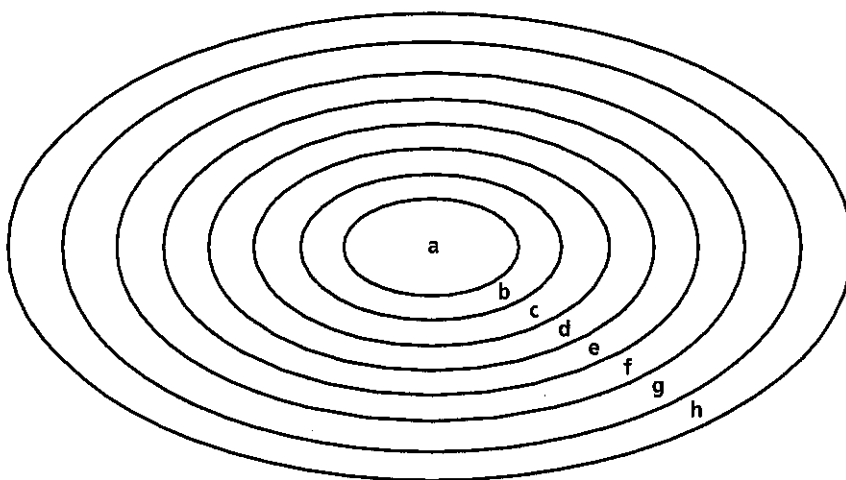
1. How were the classification systems of Aristotle and Linnaeus similar? _____

2. The word part *bi-* means “two,” and the word part *nomen* means “name.” Explain how these word parts relate to the system scientists use to identify organisms. _____

3. How does the classification process used by modern taxonomists differ from that used by Linnaeus? _____

4. **Critical Thinking** Explain why Aristotle’s system of classifying animals is no longer used by biologists. Use examples from the animal kingdom to support your answer. _____

STRUCTURES AND FUNCTIONS Use the figure to fill in the names of the seven levels of organization in the modern Linnaean system of classifying organisms, with *a* representing the smallest category and *h* the largest category.



- a _____
- b _____
- c _____
- d _____
- e _____
- f _____
- g _____
- h _____