Name _____ Date _____ Class _____

Lesson Outline p 18 - 24 **LESSON 2**

Classifying Organisms

A. Classifying Living Things

1. There have been many different ideas about how to _____ living things.
2. Aristotle placed all organisms into two large groups—plants and _____.

B. Determining Kingdoms

1. Carolus Linnaeus placed all organisms into two main _____.
2. In 1969 an American biologist proposed a five-kingdom system for classifying organisms that included kingdoms Monera, Protista, _____, Fungi, and Animalia.

C. Determining Domains

1. The current system used for classifying _____ is called systematics. Systematics uses all the _____ that is known about organisms to classify them.
2. Organisms are classified into one of three _____—Bacteria, Archaea, and Eukarya—and then into one of six _____.

D. Scientific Names

1. When Linnaeus grouped organisms into kingdoms, he also developed a system for naming organisms. His system of _____ gives each organism a two-word scientific name, such as *Ursus arctos* for a brown bear.
2. A(n) _____ is a group of organisms that have similar traits and produce fertile offspring.
3. In a scientific name, the first word is the organism's _____, such as *Ursus*.
4. The second word in a scientific name identifies the _____.
5. Similar species are grouped into one _____. Similar genera are grouped into _____ and then into orders, classes, phyla, kingdoms, and domains.
6. Each species has its own _____, which is the same all over the world.

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Lesson Outline continued

E. Classification Tools

1. A(n) _____ is a series of descriptions arranged in pairs that can be used to identify an unknown organism. The chosen description leads to another pair of descriptions or to the identification of the _____.
2. A(n) _____ is a branched diagram that shows the relationships among organisms. New characteristics appear before each _____.

Scientific Names

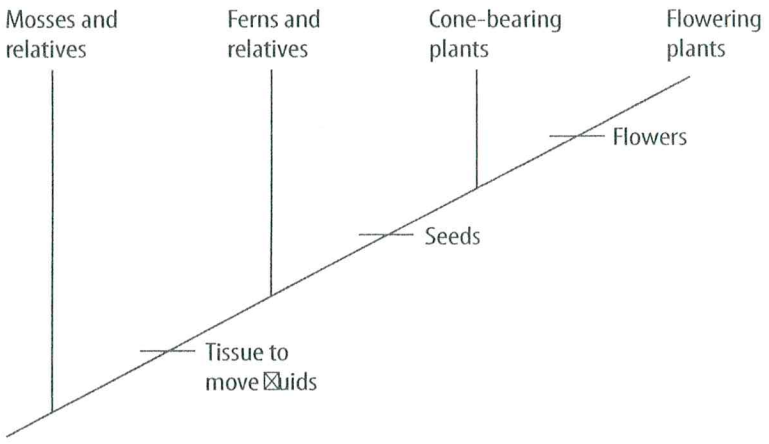
Directions: *Use your textbook to answer each question or respond to each statement.*

1. **Research** to find the scientific name for each of the organisms listed below. Write each name in the table.

Organism	Scientific Name
Galápagos tortoise	**a.**
Labrador retriever	**b.**
Giant sequoia	**c.**

2. Look at the cladogram shown below. According to the cladogram, which plants are flowering plants most closely related to?

_____



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Content Practice A **LESSON 2**

Classifying Organisms

Directions: *On each line, write the term from the word bank that correctly completes each sentence. Some terms may be used more than once.*

binomial nomenclature	**cladogram**	**dichotomous key**	**domains**	**genus**
kingdoms	**scientific name**	**species**	**systematics**	

1. Based on similar structures, Linnaeus classified all organisms into two _____.

2. As more discoveries were made, Whittaker proposed classifying organisms into five _____.

3. The current system of classifying organisms uses molecular analysis and is called _____.

4. The current system classifies organisms into three _____ and six _____.

5. Scientists still use Linnaeus's naming system called _____ to give each species a name.

6. *Ursus arctos* is the _____ for a brown bear.

7. *Ursus* is the brown bear's _____.

8. The word *arctos* is the brown bear's _____ name.

9. A _____ is a series of questions that helps you identify an unknown organism.

10. A branched diagram called a _____ can help you understand the relationships among organisms.

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Key Concept Builder **LESSON 2**

Classifying Organisms

Key Concept What methods are used to classify living things into groups?

Directions: *Use the terms from the word bank to answer each question on the lines provided. Some terms may be used more than once.*

Animalia	**Archaea**	**Bacteria**	**Eukarya**
Fungi	**Plantae**	**Protista**	

1. Which terms are the names of domains?

_____

_____

2. Which terms are the names of kingdoms?

_____

_____

3. Which four terms represent organisms in the same domain?

_____

_____

Directions: *Put a check mark on the line before each item in this list that is used to classify organisms.*

_____ **4.** cell types

_____ **5.** number of organisms

_____ **6.** habitats

_____ **7.** how they obtain food and energy

_____ **8.** amount of blood

_____ **9.** common ancestry

_____ **10.** molecular analysis

_____ **11.** age of organisms

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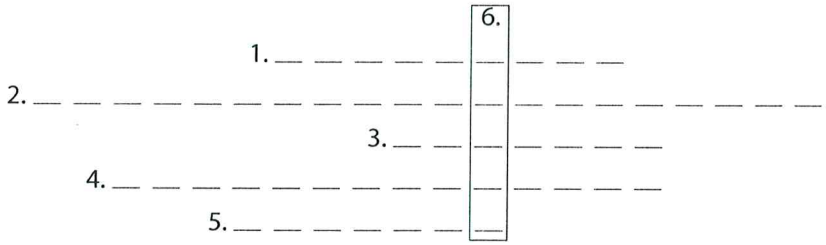
Content Vocabulary

LESSON 2

Classifying Organisms

Directions: *Use the clues and the terms listed below to complete the puzzle. Then on each line, write the term from the word bank that correctly completes each sentence.*

binomial nomenclature	**cladogram**	**dichotomous key**
genus	**kingdom**	**species**



1. A diagram called a _____ shows the relationships among organisms.

2. The system of _____ gives every organism a two-word scientific name.

3. _____ is the classification category above phylum and below domain.

4. A _____ can be used to identify an unknown organism.

5. A _____ is a group of organisms that have similar traits and produce fertile offspring.

6. A _____ is a group of similar species.

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