

There are tens of thousands of species on earth and scientists have lists of all known species. In the 1700s Carl Linnaeus of Sweden was a scientist who invented a way to classify all animals based on their characteristics and his system of using two names for every plant and animal continues to be used today. The two names in the Linnaean classification are a bit like each species having a last name common to a group and a first name that uniquely identifies the species. Then above the two-name classifications are classifications of animals in a tree-like structure that keeps grouping similar animals and plants together.

At the highest level of the system of classifying animals are the major types of animals like birds, mammals, fish, reptiles and amphibians. There are descriptions for each of these categories.

Mammals are defined to be creatures that

- Are vertebrates, which means they have a backbone.
- Are warm-blooded, which means they can maintain a constant body temperature even when the weather is hot or cold.
- Have fur or hair. Most mammals, for example dogs, have fur for their entire life. Aquatic mammals, like whales and dolphins, have only a small amount of hair when they are first born.
- Almost all female mammals give birth to babies and feed them milk through one or more mammary glands on the outside of their bodies.
- Have three small bones in the middle portion of their ears.
- Have a heart with a single aorta (artery) that bends to the left. Other animals have more than one artery entering the heart or just one artery that bends in a different direction.
- Have a diaphragm. The diaphragm is a sheet of muscle that extends along the bottom of the rib cage inside the mammal.

However there are a few animals that are classified as mammals that don't have all the characteristics. For example, the female platypus lays eggs.

Name: _____ Date: _____

Circle the correct answer.

1. Vertebrates are creatures that have
 - a. A backbone
 - b. Fur
 - c. A heart with a single aorta
 - d. All of the above

2. Mammals can maintain their body temperature when the weather is
 - a. Hot
 - b. Cold
 - c. Both a. and b. above
 - d. None of the above

3. Some mammals have fur or hair
 - a. Only when they are young
 - b. For their entire life
 - c. Both a. and b. above
 - d. None of the above

4. Baby mammals eat
 - a. Insects
 - b. Amphibians
 - c. Reptiles
 - d. None of the above

5. How many bones are there in the middle ear of a mammal?
 - a. Two
 - b. Three
 - c. Four
 - d. Five

6. The diaphragm of a mammal is located
 - a. In front of the lungs
 - b. In front of the stomach
 - c. Along the bottom of the rib cage
 - d. In front of the intestines

Name: _____ Date: _____

1. Do some research and write a short biography of Carl Linnaeus.
2. Name several creatures that aren't mammals but still have a backbone.
3. Explain the difference between warm-blooded and cold-blooded animals. If you don't know the answer, look it up.
4. Do some research on dolphins and find out when a dolphin has hair or fur.
5. Do some research and find a diagram of the human heart. Locate the aorta and explain its function.
6. Do some research and explain the location and function of the human diaphragm.
7. Do some research and explain the location and function of the three small bones in the middle of the human ear.

Answer Key

Multiple Choice

1. a.
2. c.
3. c.
4. d.
5. b.
6. c.

Short Answer

1. Individual response
2. Individual response
3. Individual response
4. Individual response
5. Individual response
6. Individual response
7. Individual response