

Section 33-1 Mammals (pages 737-745)

SECTION REVIEW

In this section you were introduced to the group of endothermic vertebrates known as mammals. You learned about the general characteristics of mammals and about a few interesting adaptations of particular mammals.

The single most important characteristic of mammals is that females have mammary glands. The mammary glands produce milk that nourishes the young after they are born.

Mammals also have a variety of other distinguishing characteristics. Their bodies are insulated by various combinations of fur, hair, and subcutaneous fat. And many mammals have sweat glands that help cool the body. Almost all mammals have several kinds of teeth, which are specialized for processing

food in different ways. All mammals have lungs and a breathing muscle called the diaphragm. They have a double-loop circulatory system and a four-chambered heart. Mammals have the most highly developed kidneys and brains of all vertebrates.

Mammals are divided into three groups according to their method of reproduction. Monotreme embryos complete their development in a leathery-shelled egg that develops outside the mother's body. Marsupial embryos are born at a very early stage of development and complete their development inside the mother's marsupium, or pouch. Placental embryos complete their development inside the mother's uterus.

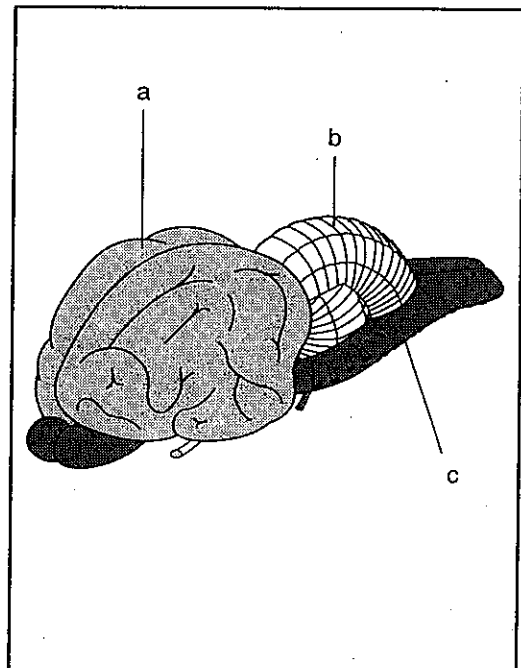
The Mammalian Brain: Building Vocabulary Skills

The accompanying diagram shows the structure of a typical mammal's brain. In the space provided, identify each part of the brain and describe its function.

- a. _____

- b. _____

- c. _____



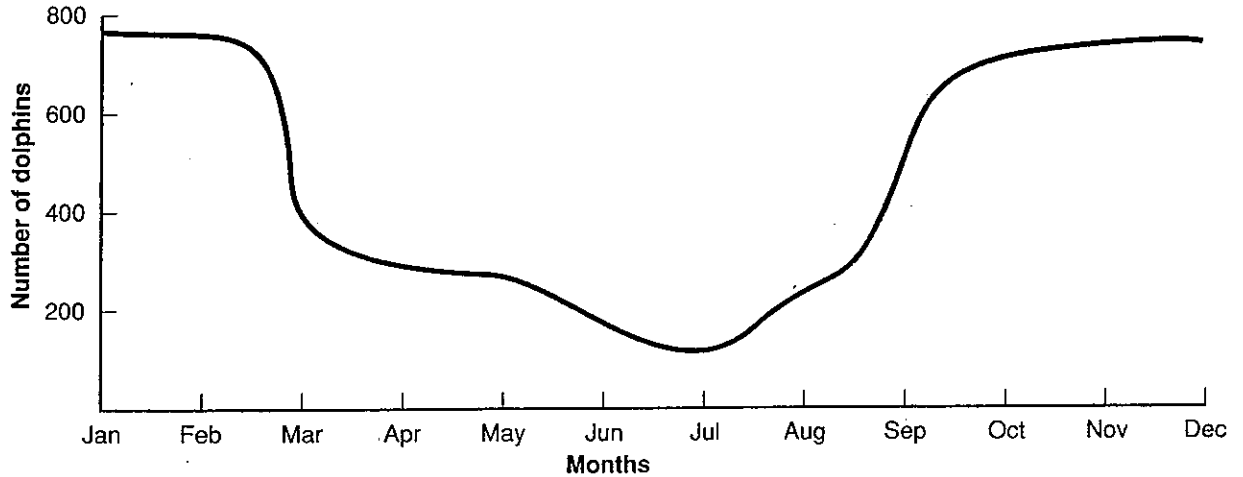
Summarizing Information: Finding the Main Ideas

The following table lists a number of functions in animals. Complete the table by briefly noting what you have learned about each of these functions in mammals.

Function	Characteristics of Mammals
Feeding	
Respiration	
Internal transport	
Excretion	
Response	
Movement	
Reproduction	
Body temperature regulation	
Parental care	

Studying Dolphin Migration: Analyzing Data

A certain species of dolphin migrates every year from northern waters to waters just off the coast of the United States. In these southern waters, the dolphins give birth to young and breed. While investigating the migratory behavior of these mammals, scientists counted the dolphins in the breeding area every month. The accompanying graph shows the results of the monthly count.



1. During which months are the most dolphins in the breeding area?

2. During which months are the fewest dolphins in the breeding area?

3. During which months is the breeding season for the dolphins likely?

4. What is the probable reason that the dolphins migrate south to give birth and to breed?

5. What does a newborn dolphin eat? How does it get its food?

Concept Mapping

The construction of and theory behind concept mapping are discussed on pages vii-ix in the front of this Study Guide. Read those pages carefully. Then consider the concepts presented in Section 33-1 and how you would organize them into a concept map. Now look at the concept map for Chapter 33 on page 324. Notice that the concept map has been started for you. Add the key facts and concepts you feel are important for Section 33-1. When you have finished the chapter, you will have a completed concept map.

Section 33-2 Important Orders of Living Mammals (pages 746-751)

SECTION REVIEW

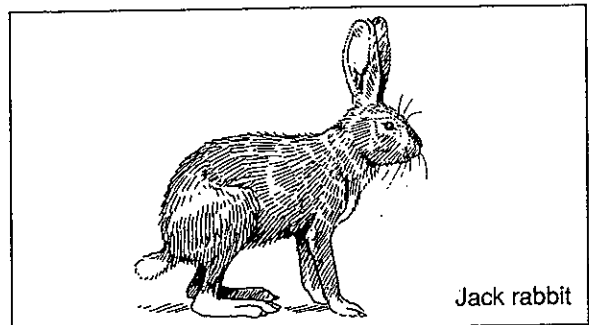
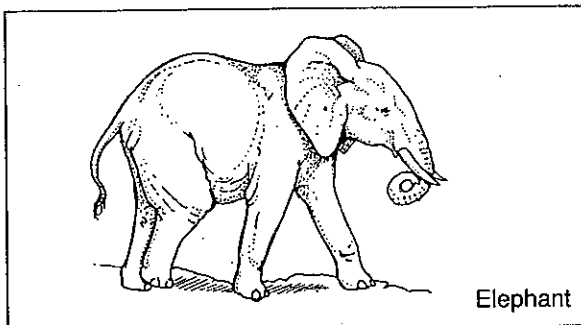
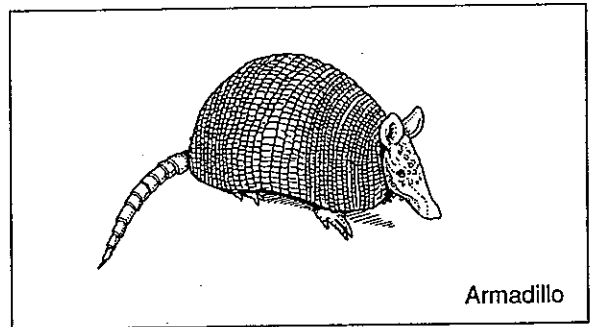
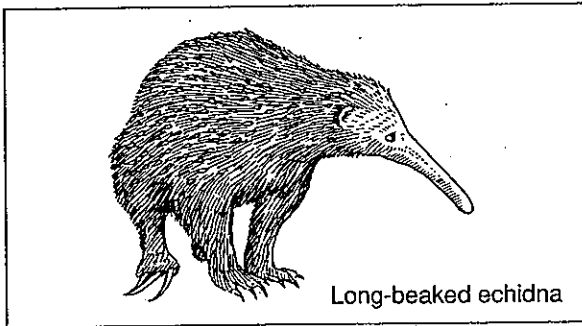
Living mammals are divided into approximately twenty orders. (The exact number is still a matter of scientific debate.) Important characteristics used to classify a mammal include its method of reproduction; the number of bones in its skull; and the structure, number, and kinds of teeth it possesses. In this section you were introduced to the fourteen major orders of mammals.

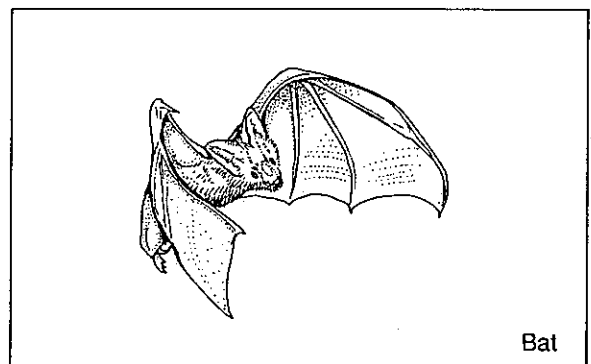
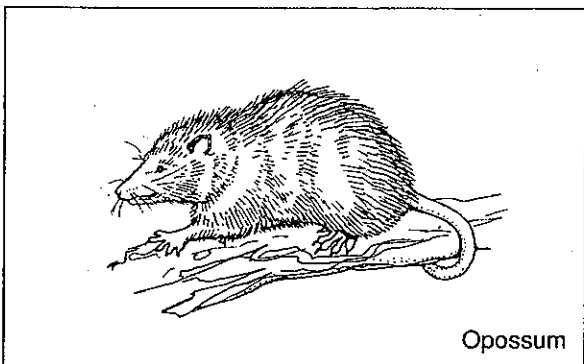
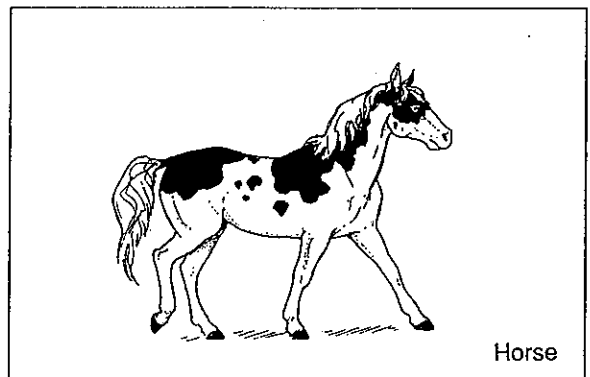
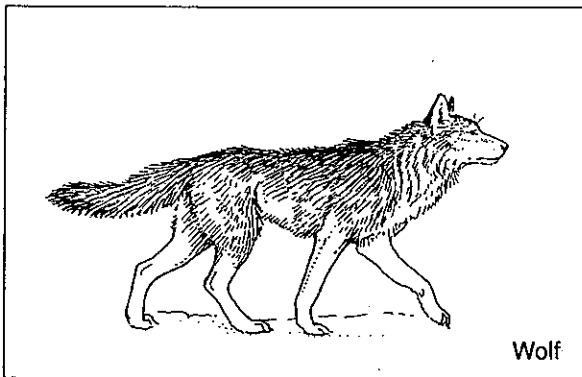
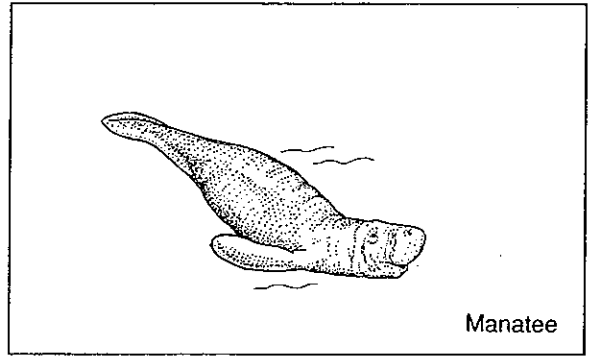
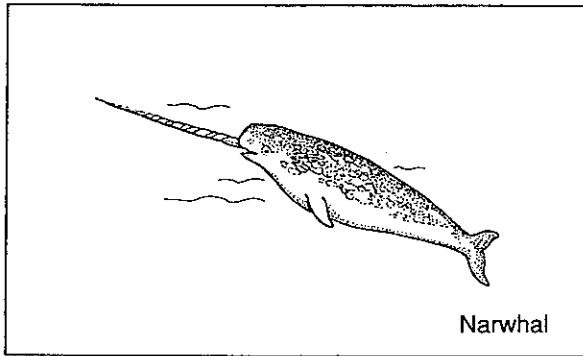
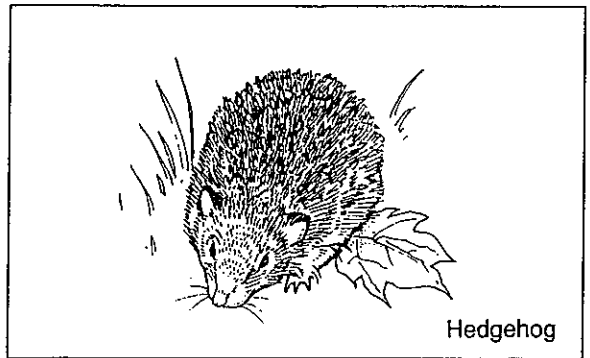
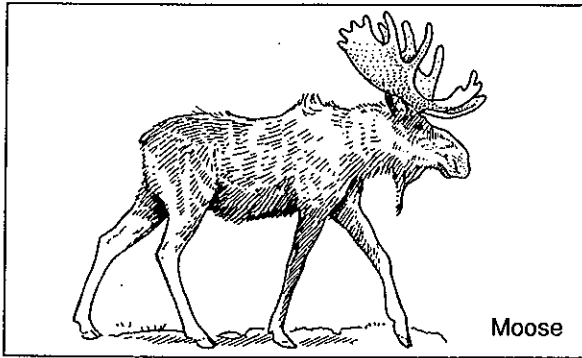
Monotremes, or egg-laying mammals, belong to the order Monotremata. Marsupials, or pouched mammals, belong to the order Marsupialia. Placental mammals make up the other mammalian orders. Order Insectivora contains small mammals that typically have long, narrow mobile snouts and feed on invertebrates such as insects. Bats belong to the order

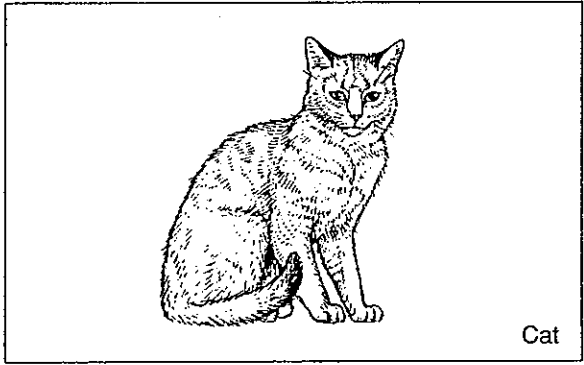
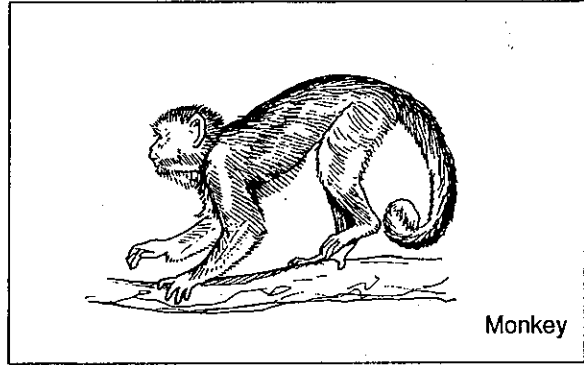
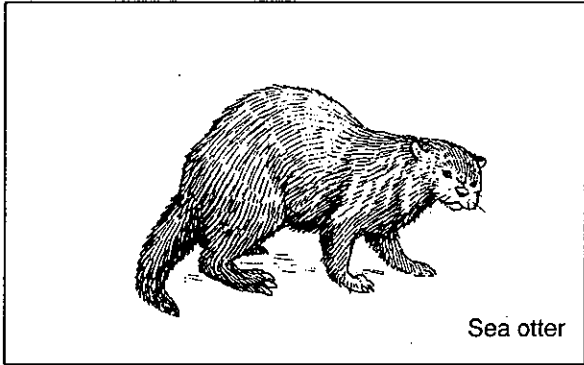
Chiroptera. Members of the order Edentata lack incisors, canines, and premolars, and may be entirely without teeth. Rodents, or members of the order Rodentia, are gnawing mammals. The order Lagomorpha, whose name means rabbit-shaped, contains rabbits, hares, and pikas. The order Carnivora consists of meat-eaters, such as cats, dogs, bears, raccoons, weasels, hyenas, and seals. Whales, porpoises, and dolphins belong to the order Cetacea. Manatees and sea cows belong to the order Sirenia. The order Artiodactyla contains even-toed hoofed mammals. Elephants belong to the order Proboscidea. The order Primates contains lemurs, monkeys, apes, and humans.

Classifying Mammals: Using the Main Ideas

The accompanying illustrations show a number of different kinds of mammals. In the space provided, write the name of the order to which the mammals in each illustration belong.







■ Concept Mapping

The construction of and theory behind concept mapping are discussed on pages vii–ix in the front of this Study Guide. Read those pages carefully. Then consider the concepts presented in Section 33–2 and how you would organize them into a concept map. Now look at the concept map for Chapter 33 on page 324. Notice that the concept map has been started for you. Add the key facts and concepts you feel are important for Section 33–2. When you have finished the chapter, you will have a completed concept map.