

CHAPTER 33

Mammals
Section 33-2

SKILL ACTIVITY
Analyzing data

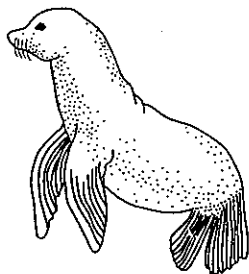
Classifying Mammals

Zoologists and other biologists must make careful observations so that they can accurately classify animals. Why is a bat a mammal and not a bird? To answer this, an observer must realize that even though both bats and birds fly, bats nurse their young and have hair—two important mammalian characteristics. In this activity, you will compare the features of several mammals.

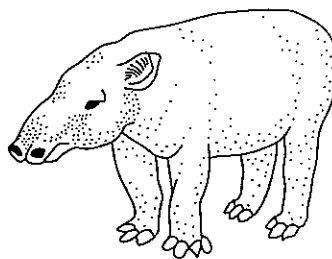
Mammals share certain features with each other and with other animals, but they also differ in many ways. The drawings below are of animals from some groups in the class *Mammalia*.



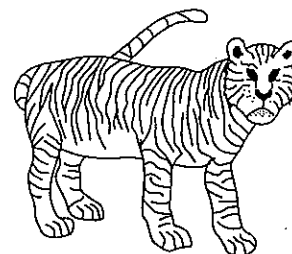
Shrew



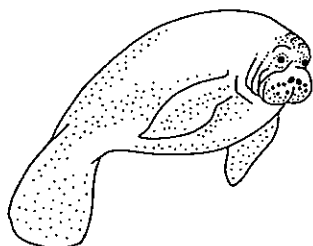
Seal



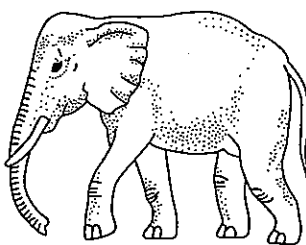
Tapir



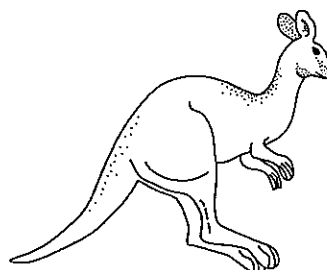
Tiger



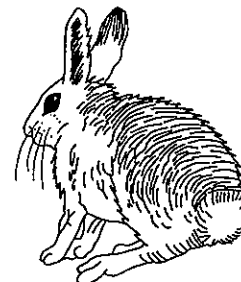
Manatee



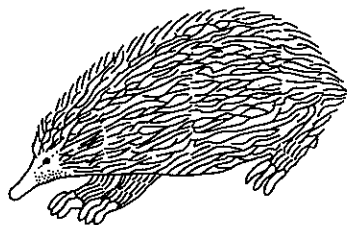
Elephant



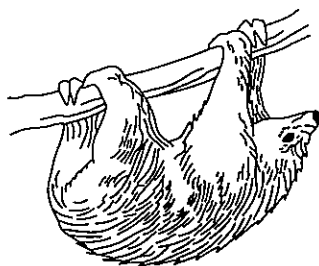
Kangaroo



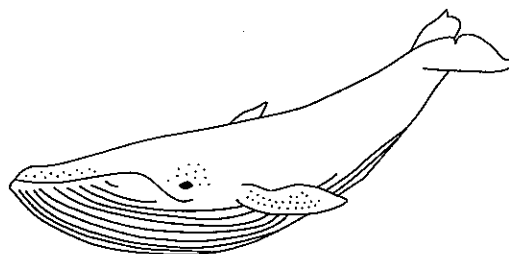
Rabbit



Spiny anteater



Sloth



Whale

The chart below lists some observations a student has made about some groups of the class *Mammalia*. He has marked each observation "Always," "Never," or "Sometimes." However, one observation about each group is incorrect. Find the box with the incorrect information, and mark it with an "X." Place the correct information in the column labeled "Correction." Explain your correction in the column labeled "Explanation." In the column labeled "Animal," write the name of the animal shown on page 3 that belongs in each mammalian group.

Animal	Mammalian Order	Observations				Correction	Explanation
1.	Marsupalia	pouched sometimes	hairy always	bony plates never	internal fertilization always		
2.	Cetacea	carnivorous always	hind legs never	water- dwelling always	gills never		
3.	Edentata	bony plates always	clawed toes always	lungs always	water- dwelling never		
4.	Lagomorpha	lateral jaw motion always	chisel-like incisors sometimes	lays eggs never	pouched sometimes		
5.	Monotremata	teeth never	external fertilization never	nurses young sometimes	quills sometimes		
6.	Carnivora	nurse young always	internal development always	toothless sometimes	hairy always		
7.	Perissodactyla	hooves sometimes	four- chambered heart always	lays eggs never	warm- blooded always		
8.	Proboscidea	pouched never	trunks sometimes	nurses young always	internal fertilization always		
9.	Sirenia	water- dwelling always	carnivorous always	lays eggs never	nurses young always		
10.	Insectivora	backbone always	hooves never	pouched sometimes	four- chambered heart always		
11.	Pinnipedia	gills sometimes	lays eggs never	carnivorous always	warm- blooded always		

CHAPTER 33


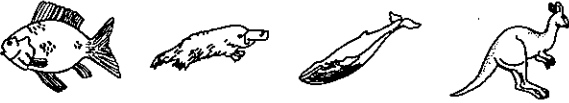





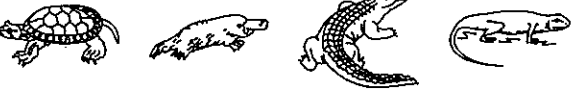
Mammals
Section 33-2

SKILL ACTIVITY
Identifying relationships

Which Animal Doesn't Belong?

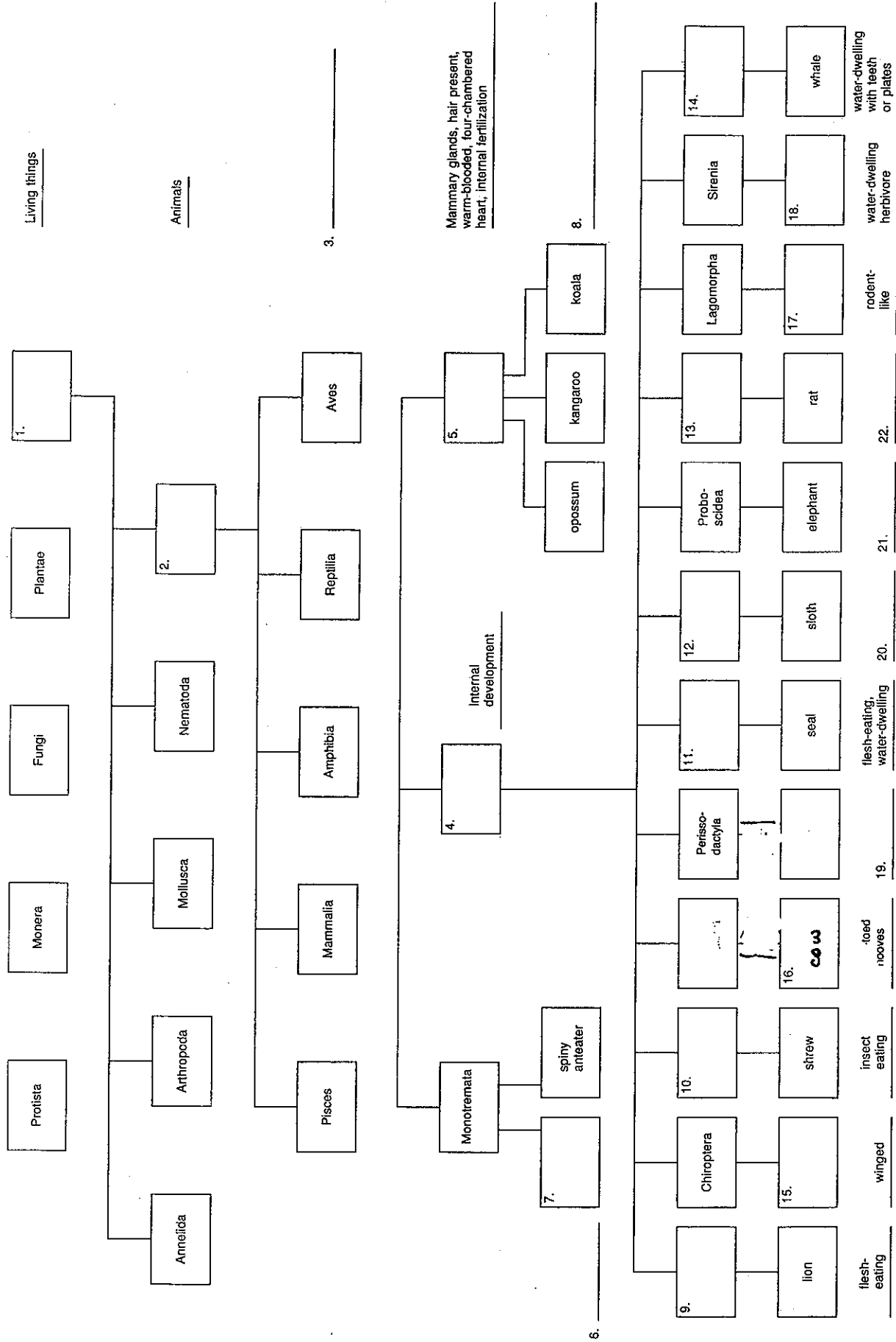
A classification system helps biologists to see relationships among organisms. In this activity you will identify relationships among mammals.

A. Each group of animals shown on the chart has a characteristic in common. One animal in each group also differs from the others in the group. For the numbers 1 through 8, name the characteristic that each animal group shares. For the numbers 9 through 16, indicate which animal differs from the others in each group, and explain why.

Shared Characteristic	Group	Difference
1.		9.
2.		10.
3.		11.
4.		12.
5.		13.
6.		14.
7.		15.
8.		16.

B. This chart illustrates the relationships of mammals among themselves, and to animals in other orders, classes, phyla, and kingdoms. Complete the chart by filling in all of the blanks.

SHARED CHARACTERISTIC



Living things

Animals

Mammary glands, hair present, warm-blooded, four-chambered heart, internal fertilization

flesh-eating

winged

insect eating

toed nooves

19.

flesh-eating, water-dwelling

20.

21.

rodent-like

water-dwelling herbivore

water-dwelling with teeth or plates

6.

3.

8.

7.

4.

5.

1.

2.

9.

10.

11.

12.

13.

14.

15.

16.

17.

18.

19.

20.

21.

22.

Mammals

Word Game

On the lines below, write the word or words that best fit the description on the left. When you are finished, the boxed-in letters will spell out one of the topics discussed in the chapter. Fill in that word or phrase in the space provided.

1. Glands that produce milk in female mammals

_____ _____

2. Pouched mammals

_____ _____

3. Egg-laying mammals

_____ _____

4. Chamber in the digestive tract of grazing mammals in which cellulose is broken down

_____ _____

5. Organ in certain mammals through which nutrients and wastes are exchanged between mother and embryo

_____ _____

6. Type of tail used for grasping while climbing by some primates

_____ _____

7. Pouch in which certain mammalian embryos complete early development

_____ _____

8. One of two upper chambers of the mammalian heart

_____ _____

Class of organisms made up of endothermic animals
