Comparing Mammal Forelimbs

Name:

Period:

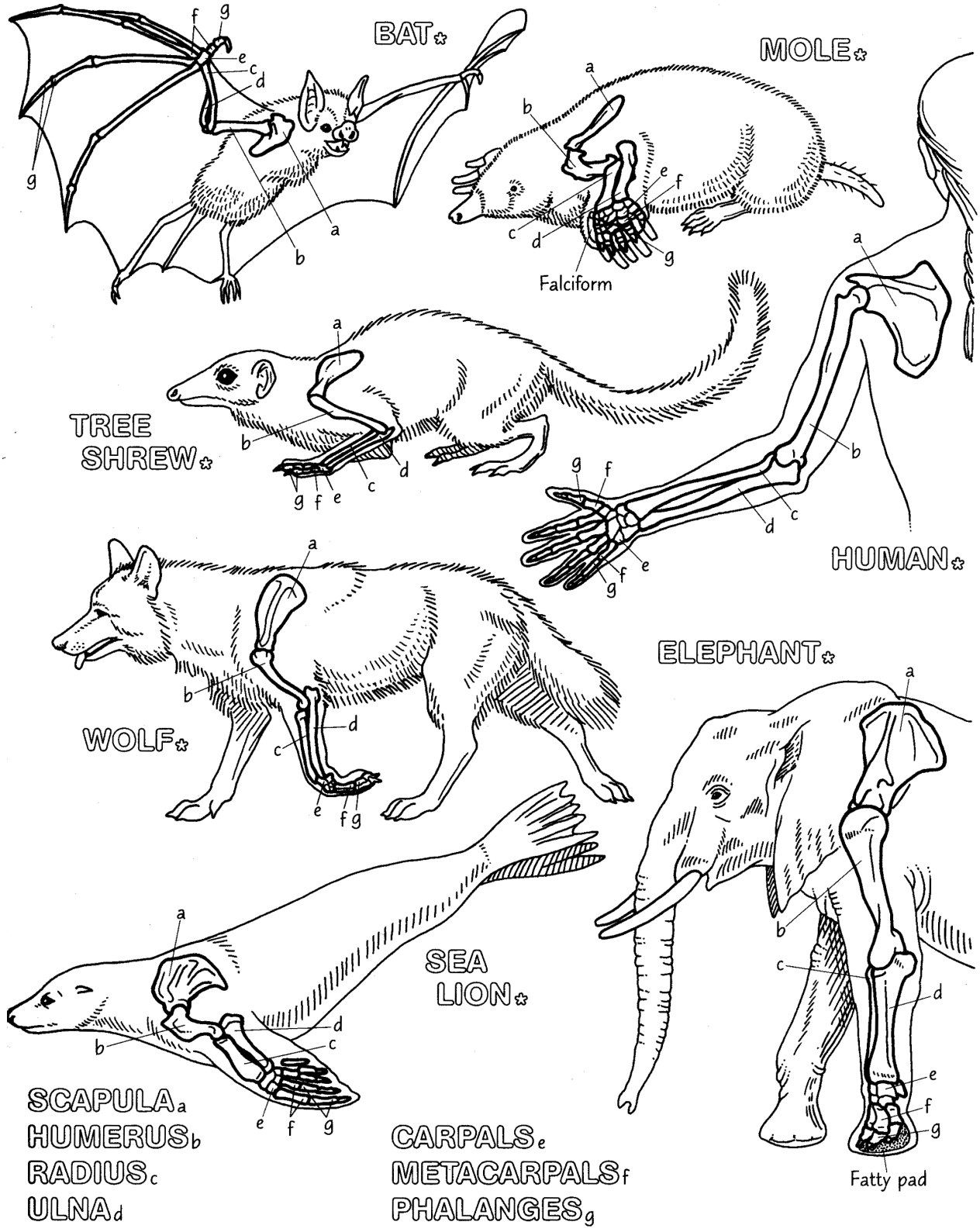

diagram from The Human Evolution Coloring Book (2000) by Adrienne L. Zihlman

Practice: 14 points

Comparing Mammal Forelimbs Name:

Period:

Follow the directions below to color-code the diagram and to answer the questions. You can use p.304 of your textbook to help you. Use colored pencils, and check off each box ☑ as you finish that part of the instructions.

Start by filling in the blanks below using terms from the word banks below each paragraph.

One of the ways that _____ try to figure out how organisms are related is by studying their anatomy (body parts). They then compare the same parts of different _____ to see how similar they are. When scientists decide that groups of organisms are closely _____, they base this decision upon how _____ in structure their body parts are in look and function. For example, _____ (animals that have a backbone) have _____ structures and musculature (groups of muscles) that have a lot of similarities. For this exercise, you will be examining the bones in the forelimbs (arms, or front legs) of several different mammals.

organisms related scientists similar skeletal vertebrates

Scientists have grouped _____ together because they all have fur, they are warm-blooded, and have females that produce _____ for their young. However, another reason that mammals have been _____ together is because of the similarity in their _____. This means that mammals have similar _____ of bones in similar places in their bodies. Because of this, _____ believe that all mammals came from a common _____.

ancestor grouped mammals milk numbers scientists skeletons

So you can still read the names, carefully color the names of each of the mammals using black □.

Follow the color coding in the list below, and count the number of mammals on the diagram that have that bone in their forelimb.

Color SCAPULA and all bones with an (*a*) orange □. How many of the mammals had this bone? _____

Color HUMERUS and all bones with a (*b*) yellow □. How many of the mammals had this bone? _____

Color RADIUS and all bones with a (*c*) blue □. How many of the mammals had this bone? _____

Color ULNA and all bones with a (*d*) red □. How many of the mammals had this bone? _____

Color CARPALS and all bones with an (*e*) light blue □. How many of the mammals had these bones? _____

Color METACARPALS and all bones with an (f) purple □. How many of the mammals had these bones? _____

Color PHALANGES and all bones with a (*g*) green □. How many of the mammals had these bones? _____

Do all mammals use their forelimbs for the same thing? _____ Give three different examples below of how the mammals in the diagram use their forelimbs:

#1—

#2—

#3—

Practice: 14 points