

**QUICK LAB** DIRECTED Inquiry

# Comparing Anatomy

In this lab, you will compare the anatomy of several vertebrate animals. You will create a model of a selected vertebrate that you will present to the class, then compare your model to the models of other groups.



## PROCEDURE

- 1 Each member of the group should select one of the bone arrangements in the **picture** provided by your teacher.
- 2 In the space below, draw an outline of your selected animal's limb.

### OBJECTIVE

- Compare the anatomy of vertebrates.

### MATERIALS

For each group

- clay, modeling, five colors
- colored pencils, five colors
- picture of animal anatomy

- 3 Shape **modeling clay** into the limb bones. Position the model bones within the outline. If possible, use colors that are consistent with the illustration. Otherwise, decide as a group which colors will be used for specific bones. Record your decisions below.

---

---

---

---

*Quick Lab continued*

- 4 Look at the models created by other groups. Compare the shape of each bone as it appears in different limbs. Discuss how the size and shape of each bone relates to its function.

---

---

---

---

---

---

---

---

---

---

Original content Copyright © by Holt McDougal. Alterations to the original content are the responsibility of the instructor.

# Homologous Structures

A homologous structure is an organ or bone that is derived from a common evolutionary ancestor. Below are examples of forelimbs in several species that demonstrate reshaping of the same bones.

Not all structures that function similarly are homologous. Bat wings and butterfly wings are both adapted for flight but evolved separately; these structures are analogous. Bat wings and bird wings are homologous as forelimbs but evolved flight adaptations separately. This makes them either analogous or homologous depending on your frame of reference.

