

CHAPTER 2

SKILLS LAB

Observing

A Look Beneath the Skin

In this lab, you will learn about your own skeletal muscles by observing the “arm” muscles of a chicken.

- ◆ **Problem** What are some characteristics of skeletal muscles? How do skeletal muscles work?

- ◆ **Materials**

protective gloves

paper towels

scissors

water

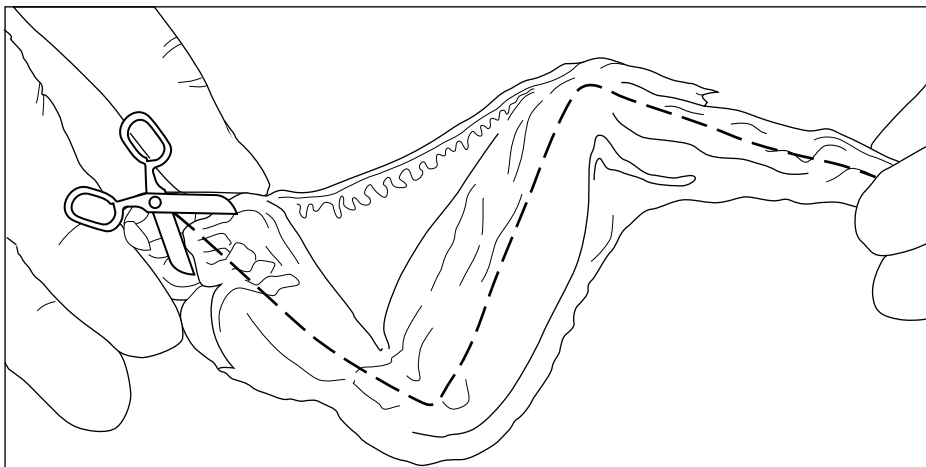
dissection tray

uncooked chicken wing, treated with bleach

- ◆ **Procedure**    

Review the safety guidelines in Appendix A.

1. Put on protective gloves. **CAUTION:** *Wear gloves whenever you handle the chicken.*
2. Your teacher will give you a chicken wing. Rinse it well with water, dry it with paper towels, and place it in a dissecting tray.
3. Carefully extend the wing to find out how many major parts it has. Draw a diagram of the external structure. Label the upper arm, elbow, lower arm, and hand (wing tip).
4. Use scissors to remove the skin. Cut along the cut line as shown in the photo. Only cut through the skin. **CAUTION:** *Cut away from your body and your classmates.*



SKILLS LAB *(continued)*

5. Examine the muscles, the bundles of pink tissue around the bones. Find the two groups of muscles in the upper arm. Hold the arm down at the shoulder, and alternately pull on each muscle group. Observe what happens.
6. Find the two groups of muscles in the lower arm. Hold down the arm at the elbow, and alternately pull on each muscle group. Then make a diagram of the wing's muscles.
7. Find the tendons—shiny white tissue at the ends of the muscles. Notice what parts the tendons connect. Add the tendons to your diagram.
8. Remove the muscles and tendons. Find the ligaments, the whitish ribbonlike structures between bones. Add them to your diagram.
9. Dispose of the chicken parts according to your teacher's instructions. Wash your hands.

◆ Analyze and Conclude

Write your answers on the back of this sheet or on a separate sheet of paper.

1. How does a chicken wing move at the elbow? How does the motion compare to how your elbow moves? What type of joint is involved?
2. What happened when you pulled on one of the arm muscles? What muscle action does the pulling represent?
3. Classify the muscles you observed as smooth, cardiac, or skeletal.
4. **Think About It** Why is it valuable to record your observations with accurate diagrams?

◆ More to Explore

Use the procedures from this lab to examine an uncooked chicken thigh and leg. Compare how the chicken leg and a human leg move.