

Muscles and Movement

Whether you're playing sports, dancing, skiing, or just walking to school, your body can do some amazing things! Like a machine, different parts of your body work together to make things happen. In this activity, you will make a model of your arm to explore how your bones and muscles work together to produce movement.

You Will Need

- 3 wooden dowel rods (with pre-drilled holes)
- Bolt and nut
- 2 long rubber bands
- Marker
- Masking tape



Directions

1. Label the dowel rods with the names of the three arm bones: humerus, radius, and ulna.
2. Tape the radius and ulna together at one end and in the middle. Together these bones make up the forearm. Make sure the holes at the ends of the dowel rods line up.
3. While keeping the holes lined up, place the humerus between the radius and ulna. Insert the bolt through the holes to secure the newly formed joint. The joint is the elbow joint.
4. Tie one end of a rubber band to the top of the humerus and the other end to the radius and ulna, as shown in the picture. With the elbow bent, the rubber band should be slightly loose. This rubber band represents the biceps muscle.
5. Now attach one end of the other rubber band to the middle of the humerus and the other end to the radius and ulna, as shown in the picture.
6. Bend and straighten the arm. Notice what happens to the rubber bands.

What's Going On?

Muscles keep your body on the move. Muscles work in pairs to pull bones into different positions. The biceps and triceps muscles work as a pair to bend and straighten the arm. The biceps is the muscle in the front of your upper arm that makes your arm bend at the elbow. It does this by shortening, or contracting, its muscle cells. The triceps is the muscle in the back of your upper arm that straightens your arm. The muscles work together. When one muscle contracts, the other muscle relaxes and gets longer.

