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AIM KITS

Human Body Anatomy

October 2026

October 2026: Human Body Anatomy

This month's AIM Kit is making a Working Skeleton Hand Model! Different bones in our hands can be described in a variety of ways, including strong, hinged, protective, flexible, and just plain cool. Everything your hands do—from typing on a keyboard to gripping a baseball—comes from a mix of mechanical joints and biological teamwork. Yes, a lot of incredible physics and biology goes into making your fingers move!

Can you believe that your hand contains 27 individual bones, and 14 of those are just in your fingers alone? These finger bones are called phalanges. On their own, rigid bones can't move at all. However, when they link together at joints and connect to flexible tendons, they create a simple machine that pulls to curl your fingers.

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MATERIALS NEEDED:

- 1 sheet of Cardstock (hand template base)
- 3-4 Plastic Straws (cut into segments to represent bone structures and guides)
- 1 skein of Yarn (5 pieces, cut to 12 inches each to act as tendons)
- 1 Roll of Masking Tape
- 1 Pair of Scissors
- 5 Small Beads (tied to the ends of the strings for easy pulling)

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PROCEDURE:

1. Trace Your Hand: Place your hand flat on the cardstock and trace around your fingers and wrist. Cut out the outline with your scissors.
2. Mark the Joints: Fold the cardstock fingers where your actual knuckles bend:
3. Fingers: Fold at 3 spots (top joint, middle joint, knuckle).
4. Thumb: Fold at 2 spots.
5. Attach Bone Tubes (Straws): Cut your straws into small pieces (about 1221 inch to 11 inch long). Tape one straw segment onto each section of the cardboard fingers between the folds.
6. Thread the Tendons (String):
7. Tape one end of a piece of string securely to the tip of a finger.
8. Thread the rest of the string down through all the straw segments on that finger and down past the wrist.
9. Repeat this for all 5 digits.
10. Add Finger Loops: Tie a small bead or plastic ring to the loose bottom end of each string near the wrist.

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WHY IT WORKS:

Why It Works

- The Cardboard & Straws: Represent your 27 hand bones (14 phalanges in your fingers, plus metacarpals and carpals in your palm and wrist). The folds in the cardstock act as your hinge joints.
- The Strings: Represent your tendons, which connect muscle to bone.
- The Action: When you pull down on a ring at the wrist, the string pulls on the tip of the finger bone. Because the cardboard is creased at the joints, the pull forces all the finger segments to bend inward—exactly how real tendons pull on your finger bones to let you grip objects or make a fist!



Contact Us

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About STEMducate

STEMducate is a non-profit organization dedicated to creating and promoting STEM to students from a young age to increase their curiosity and imagination. Our goal is to expose students to STEM opportunities and careers, enabling them to dream big and make their dreams a reality. We provide positive and powerful opportunities and experiences in STEM fields for people of all ages. These initiatives will hopefully entice students toward becoming the next innovators, educators, researchers, and leaders. We aim to reduce the number of unfilled jobs due to the lack of specialized skills that are needed to perform job tasks.

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