

muscles that move you

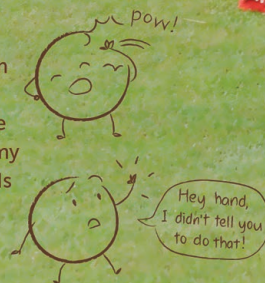
When you run, jump, swing, or throw a ball, you're using your muscles. In fact, you're using a special type of muscles: **skeletal muscles**.

What are skeletal muscles?

Skeletal muscles are muscles that connect to your bones and help you move around.

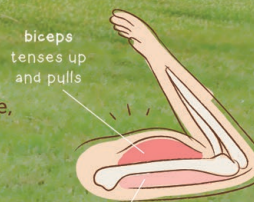
These muscles are special in two ways!

- 1 Skeletal muscles only move when you tell them to move. Have you ever had your arm fling up and bop you on the head on its own? Probably not, because to make those muscles move, you have to think, "I want my hand to hit my head." Your brain then sends that message to your muscles and — bop!



- 2 Skeletal muscles (usually) work in pairs — like a buddy system inside your body. **The muscles take turns pulling in and stretching out to make your bones move.** How does this work? Take a closer look at what happens when you flex your arm!

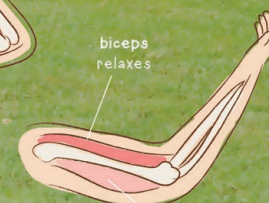
The muscle on top (*your biceps*) tenses up and pulls on your arm bones. At the same time, the muscle on the bottom (*your triceps*) relaxes and stretches out to let your arm move up.



biceps
tenses up
and pulls

triceps
relaxes

When you want to lower your arm, the opposite happens. The biceps relaxes and stretches out, while the triceps tenses and pulls.



biceps
relaxes

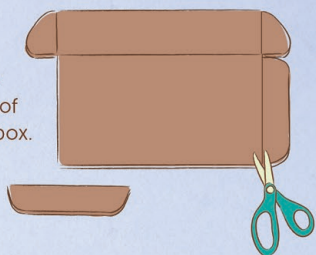
triceps
tenses up
and pulls

So the next time you pick up your backpack, play a game of tag, or throw a ball, you can thank your skeletal muscles!

rubber-band arm

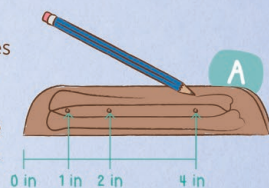
Create a model and see how your muscles work together to move your arm.

- 1 Cut the two side flaps off the top of your Kiwi Crate box.



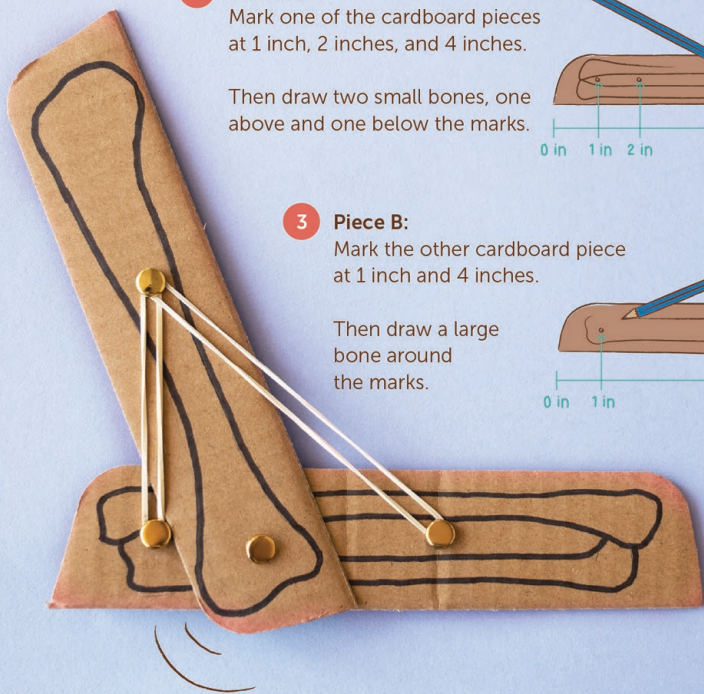
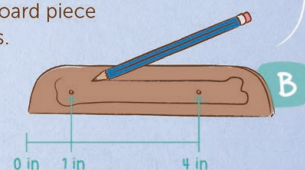
- 2 **Piece A:**
Mark one of the cardboard pieces at 1 inch, 2 inches, and 4 inches.

Then draw two small bones, one above and one below the marks.



- 3 **Piece B:**
Mark the other cardboard piece at 1 inch and 4 inches.

Then draw a large bone around the marks.



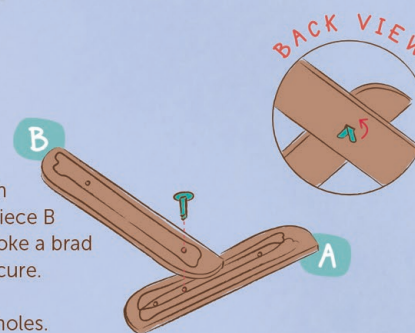
You'll need:

- ☐ Kiwi Crate box
- ☐ 4 brads
- ☐ 2 rubber bands
- ☐ ruler
- ☐ scissors
- ☐ pencil or pen

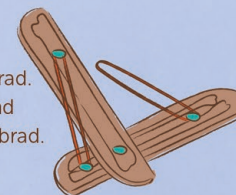
or cardboard

- 4 Poke a hole through each dot with a pencil. Line up the end hole in piece B with the middle hole in piece A. Poke a brad through the holes and open to secure.

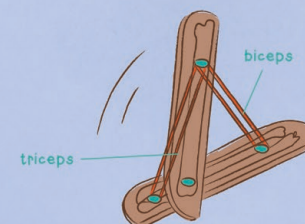
Then add brads to the remaining holes.



- 5 Stretch one rubber band around the bottom left brad and the top brad. Stretch another rubber band around the bottom right brad and the top brad.



- 6 Open and close the bones to see how your biceps and triceps muscles pull and stretch to move your arm!



try this
yourself

long jump experiment

How far can you jump?
Will running before help you jump farther?

you'll need:



masking tape

experiment #1

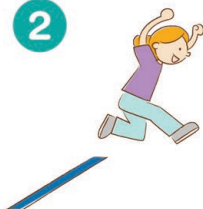
standing and jumping

1



Stand in front
of a start line.

2



Jump as far
as you can.

record your observations:

experiment #2

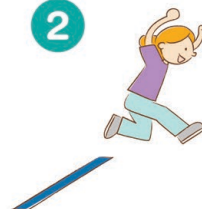
running and jumping

1



Run towards a
start line.

2



Before you pass
the line, jump as
far as you can.

record your observations:

In which experiment did you
jump farther? (circle one)

#1

#2



Jumping & Sports

The long jump is a track-and-field event where athletes jump from one point. In this event, people run down a path and jump as far as possible into a pit filled with sand.

Photo by Kgriff92 via Wikimedia / CC-BY-3.0

protein fruit dip

This dip is nutty, delicious, and full of protein, which helps your muscles grow!



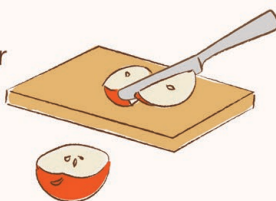
ingredients:

- ☐ 1 tablespoon honey
- ☐ 1 cup Greek yogurt
- ☐ cinnamon (to taste)
- ☐ 4 tablespoons almond butter (or any nut butter substitute)
- ☐ apple

- 1 Stir the yogurt, almond butter, honey, and cinnamon together in a bowl.



- 2 Wash and cut your apple into slices.



- 3 Dip the apple into your protein dip and enjoy!



Did you know?

You need to eat protein because your body uses it to repair hurt muscles and to build new ones! In this recipe, the most protein is in the Greek yogurt and the almond butter. Other foods with lots of protein include meat, chickpeas, and eggs.

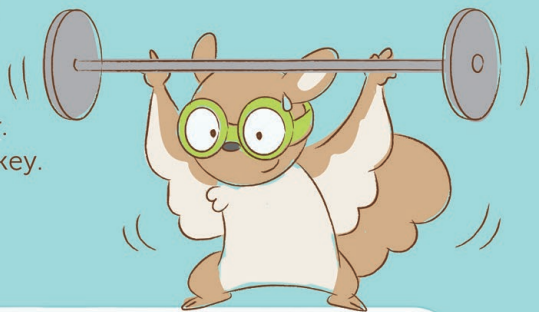
major muscle puzzle

What is the largest muscle in the human body?

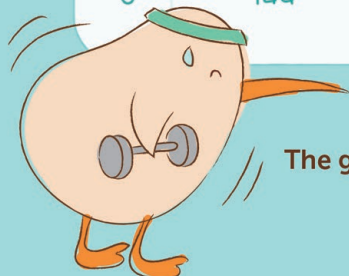
Look at the words in each line; can you find the letter that's used only once?

For line 1, there's only one "b" in the words cart, bat, enter, and center. So "b" goes in space 1 in the answer key.

Do the same thing for all the other lines, and you'll find the answer!



1	cart	bat	enter	center
2	loft	tea	fall	leaf
3	bead	head	hat	bed
4	leak	take	look	lake
5	banter	tan	boat	banner
6	lad	bald	dad	lamb



Answer:

The gluteus maximus, otherwise known as the

b
 1 2 3 4 5 6