



Curiosity Guide #505

Circulatory System

Accompanies Curious Crew, Season 5, Episode 5 (#505)

Muscular Heart

Investigation #5

Description

How strong is your heart?

Materials

- Tennis ball
- A friend
- Timer

Procedure

- 1) Challenge a friend to squeeze a tennis ball with one hand.
- 2) Is squeezing easy or difficult?
- 3) Challenge your friend to squeeze the ball 90 times in one minute.
- 4) Time your friend. Then ask your friend how his or her hand feels.
- 5) What does this show you about the heart?

My Results

Explanation

The heart is a very strong muscle. The force required to squeeze the tennis ball is similar to the force exerted when the heart pumps blood throughout the body. An average resting child's heart beats about 90 to 120 times every minute, while an adult's resting rate is about 72 beats per minute. Even when at rest, the heart continues to pump with that great force, a force two times greater than your leg muscle when you are sprinting.

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