How Do I Measure?
Grades 3 - 6

Adapted from <u>Family Math</u> by Kerr Stenmark et. al.

Learning Objectives: measuring yourself, finding ratios, learning about your body.

Part 1: Are you a long rectangle, a short rectangle, or a square?

a. Use a long piece of string, and cut it so it is exactly as long as you. Be careful - don't stretch the string too tight, but don't let it be too loose either.

b. Use the string to find out if you are a long rectangle, a short rectangle, or a perfect square. Hold the string along your outstretched arms.
   - If the string is longer than your arm span, you are a long rectangle (longer than you are wide)
   - If the string is shorter than your arm span, you are a short rectangle (shorter than you are wide)
   - the string is the same as your arm span, you are a square

c. What type of rectangle are you? How much difference is there, in inches, between your height and your arm span?

Part 2: Going Around

a. You know that your head is bigger than your wrist - but how much?
    Take some guesses and fill in the sentences below:

    1. I guess that the distance around my head is _____ times
        bigger than the distance around my wrist.

    2. I guess that the distance around my head is _____ times
        bigger than the distance around my ankle.

    3. I guess that the distance around my knee is _____ times
        bigger than the distance around my wrist.

    4. I guess that the distance around my neck is _____ times
        bigger than the distance around my wrist.

    5. I guess that my height is _____ times bigger than the distance
        around my head.

    6. I guess that my height is _____ times bigger than the distance
        around my wrist.

b. Now that you have guesses, it's time to find out! Use a new piece of string
    (not the one that is your height). Wrap it gently but firmly around your
    wrist. Pinch or mark the string, unwrap it, and then measure how much
    string it took to go around your wrist. Write down the measurement in the
    table below.

    After you measure your wrist, use string to measure your head, your knee,
    your neck, and your ankle. Record all the measurements below. Finally,
    measure your height string too, so you have that one as well.

Body part	Distance around
Wrist	
Head	
Ankle	
Knee	
Neck	

My whole body has a length of _____.

c. Use a calculator to help figure out the correct ratios.

1. The distance around my head is _____ times bigger than the distance around my wrist.

2. The distance around my head is _____ times bigger than the distance around my ankle.

3. The distance around my knee is _____ times bigger than the distance around my wrist.

4. The distance around my neck is _____ times bigger than the distance around my wrist.

5. My height is _____ times bigger than the distance around my head.

6. My height is _____ times bigger than the distance around my wrist.

Part 3: Reflect

What was easy?

What was hard?

What was surprising?

Share your final charts and your reflection with your class!

And if you are looking for more …

How close do dolls and action figures come to imitating real people? Which ones are more accurate, and which ones are completely different?

Find a doll or an action figure (or a stuffed animal!). Use the same string method to measure the proportions. See how it compares to your own

What surprises did you find? Take a photo, and share your results with your class!