



Stand Tall!

The Big Idea:

Every one of us is unique, but there are a few things about the human body's bones that are true for all of us!

You Will Need:

- ★ You!
- ★ Measuring tape

The Math Behind the Scenes:

These fun tricks show how to compare the lengths of different parts of the body. Some of these come as a surprise. Since your foot is far away from your face, it looks smaller than it really is!

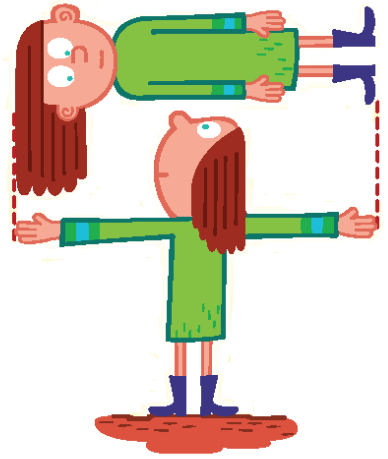
Four Slick Tricks

Here are 4 quick fun tricks you can try on your own body. See if family members get the same result!

★ Do you think your foot is longer or shorter than the distance from your elbow to your wrist? Take a guess, then hold up your foot to see what happens! It could be either way for you, but for grown-ups that length is almost always the same. Grown-ups, try it!

★ Stretch your arms out to the side to make a T. Do you think your arm span is longer or shorter than your height?

1. Lie on your back and stretch your arms straight out so your body makes a T on the floor.
2. Have a family member place an object at your fingertips at each side to mark your arm span.
3. Now, without bumping the markers, turn yourself 90 degrees and lie with your feet at one marker. Does your head reach to the other marker? Your full body length should be about the same!



★ Try to lick your own elbow. We are positive that you won't be able to do it!

★ Each day you become a little shorter from morning until night, because gravity pulls your body down and you scrunch up a bit. Then as you sleep, you stretch out again. Measure your height very carefully at night, then measure again when you wake up. See if it's the same! Try it on a grown-up, too: the difference for them will be bigger.

Arm-and-Leg Math Teasers

Try as many questions as you can! Answers upside-down below.

PreK: Look at your 2 feet. Now take 5 steps as you count from 1 to 5!

Kindergarteners: If you're 3 feet tall now, and you will be 2 feet taller by the time you're 12 years old, how tall will you be?

1st- graders: If your foot is 8 inches long, and it's going to be 3 inches longer when you're a grown-up, how long will your foot be?

2nd-graders: If you and 5 friends try these tricks, how many feet do you all have together? Remember to count your own feet! Bonus: How many toes do you all have?

3rd-graders: If a 100-inch-tall giraffe woke up 1 inch shorter the next morning, how tall would the giraffe be?

4th-graders: If you and your friends each have a 4-foot wingspan, how many of you would have to stand fingertip to fingertip to wrap around a rectangular pool that's 12 feet long and 8 feet wide?

5th-graders: If you're 54 inches tall right now, and you grow another $\frac{1}{9}$ of your height this next year, how tall will you be a year from now?

Answers:
PreK: Count 1, 2, 3, 4, 5.
K: 5 feet tall.
1st: 11 inches.
2nd: 12 feet, since there are 6 of you in total. Bonus: You'll have 60 toes.
3rd: 99 inches tall.
4th: 10 of you: 3 on each long side, since 4 goes into 12 3 times, and 2 on each short side, since 4 goes into 8 2 times.
5th: 60 inches tall, since you'll grow another 6 inches.