Measure Yourself

Are you super tall? Or is a nanometer super small?

Try this!

Measure your height on the wall chart.

How tall are you in nanometers?

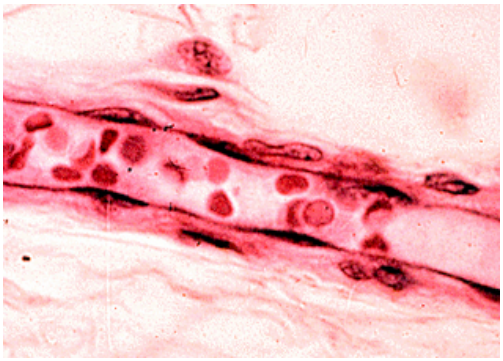
A nanometer is a billionth of a meter. That's really tiny! It takes a lot of nanometers to measure something relatively big, like you.

What's going on?

One meter is a billion nanometers. (A meter is a little longer than a yard.) So a kid who is a little over three feet tall measures one billion nanometers! Saying that you're a billion nanometers tall sounds pretty impressive, but it doesn't mean that you're super tall—it means that a nanometer is super small.

Here are some other ways to think about how small a nanometer is:

- The ridges in your fingerprints are around 250,000 nanometers wide.
- A strand of your hair is around 75,000 nanometers wide.
- One red blood cell is around 7,000 nanometers wide.
- Your DNA is two nanometers wide.
- Your fingernails grow one nanometer every second.



A human blood cells inside a blood vessel

How is this nano?

Nanoscale science focuses on things that are measured in nanometers, including atoms and molecules, the basic building blocks of our world. Nanometers are used to measure things that are too small to see. Scientists use special tools and equipment to work with, and even measure, nanometer-sized things. Regular tools like rulers are too big!

In the field of nanotechnology, scientists and engineers make new materials and tiny devices. Nanotechnology allows them to make things like smaller, faster computer chips and new medicines to treat diseases like cancer.

Photo of human blood vessel, Roger Wagner, University of Delaware.