

# Exploring Size— Measure Yourself

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*How tall are you in nanometers?*



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Smallest Science!

[whatisnano.org](http://whatisnano.org)

## Exploring Size—Measure Yourself

### Try this!

1. Mark your height on the wall chart.
2. How tall are you in nanometers?
3. Are you super tall? Or is a nanometer super small?

### Then try this!

1. Trace your hand on a worksheet.
2. How many nanometers long is it?
3. Is your hand really big? Or is a nanometer really tiny?



Measure yourself in nanometers!

### 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.

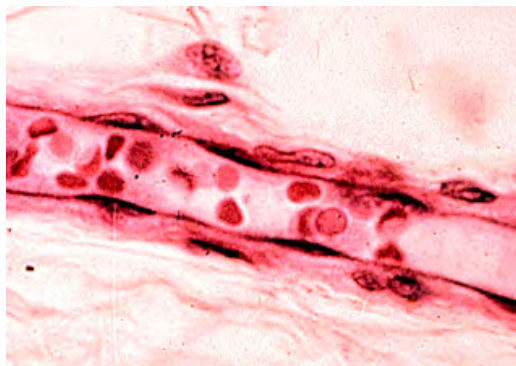


Image of a human blood vessel

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

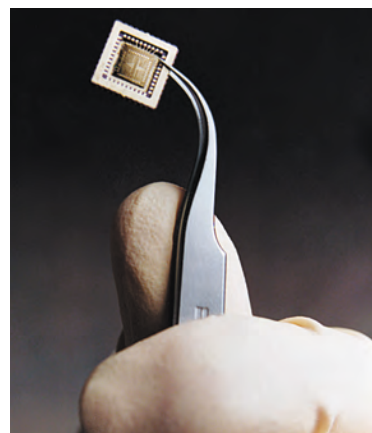
- The ridges in your fingerprints are around 250,000 nanometers wide.
- A strand of your hair is around 75,000 nanometers wide.
- Your fingernails grow one nanometer every second.

### How is this nano?

**A nanometer is a billionth of a meter.** That's really, really tiny! Nanometers are used to measure things that are too small to see. It takes a lot of nanometers to measure something relatively big, like your body.

Nanoscale science focuses on things that are measured in nanometers, anything between 1-100 nanometers in size. Scientists use special tools and equipment to work with nanometer-sized things. Regular tools like rulers are too big!

In the field of nanotechnology, scientists and engineers make tiny devices, new materials, faster computer chips, new medicines to treat diseases like cancer, and thin, flexible solar panels to capture energy from the sun.



Computer chip