NANOTECHNOLOGY
Learn about the very small

What is nanotechnology? An exciting area of science and engineering that occurs at the atomic and molecular level—at the 1-100 nanometer range. So small, we can’t see the structures with our eyes.

What is nanometer?
One Nanometer is 10-9 meters (one billionth) or about 3 atoms long! One of your hairs is about 60-80,000 nanometers wide!

“Nano” - From the Greek word for “dwarf”

What is nanotechnology all about?
The manufacturing and application of materials and systems that have unique properties because of their small size.

It’s Biology
It’s Physics
It’s Chemistry
It’s NANOSCIENCE!

SENIC
Southeastern Nanotechnology Infrastructure Corridor

jsnn.ncat.uncg.edu

Joint School of Nanoscience and Nanoengineering

NSF

Water Molecule < 1 nm
Carbon Nanotube 3 nm - 100 nm diameter
DNA Molecule ~ 3 nm diameter
Proposed Molecular gears

Compare the size of things to the “nanoscale”

Child ~ 1 m
Match ~ 2 cm

1 centimeter
1 millimeter
100 micrometers
10 micrometers
1 micrometer 1000 nm
100 nanometers
10 nanometers
10 m

Nanoscale ~ Too small to see!