

Exploring Tools— Dress Up Like a Nanoscientist

Pretend you're working in a nano lab!



NanoDays™
The Biggest Event
for the
Smallest Science!

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Exploring Tools—Dress Up Like a Nanoscientist

Try this!

1. Have a friend stand a few feet in front of you. If they want, have them put on a pair of goggles. Hold up the “Dress Up Like a Nanoscientist” card in your hand and align your friend’s face with the cutout.
2. Imagine your friend as a future nanoscientist! If you have a camera (or a phone with a camera), take a picture!

Tip: To keep things in focus, you may need to hold your arm straight out and have your friend move further back away from you.



What’s going on?

In a cleanroom, scientists learn about and make things that are too small to see. Special clothing must be worn in cleanrooms. Some of the clothing protects the scientists from harmful things in the cleanroom, but most of it actually protects the *lab* from harmful things on the scientists!

People who work in cleanrooms put on a lot of gear before they enter the lab. They get dressed in a special room—called a gowning room. They even get dressed in a special order to keep as clean as possible!

- **Shoe covers** go on over shoes.
- **Hoods** cover heads.
- **Head-to-toe suits** cover the whole body.
- **Booties** go on feet and legs.
- **Goggles and gloves** cover hands and eyes.
- **Badges** identify people.



Scientists wear special clothes to work in a nano lab!

How is this nano?



Dust-free paper and pens keep cleanrooms clean

Nano labs are clean. To make tiny things, scientists need to work in a very clean place. These special workspaces are called cleanrooms. To keep dust out of cleanrooms, scientists put on special head-to-toe suits that cover everything but their faces. They also use special supplies, like dust-free paper and pens that release fewer chemicals and fibers into the air. No pencils are allowed—they create too much dust!

Nanoscale devices are so small that even a tiny piece of dust can be much larger than many of the features. A single speck can ruin the whole device! (A nanometer is a billionth of a meter.)

In a cleanroom, scientists and engineers take advantage of special properties at the nanoscale to create new materials and devices.