



Cool Career

Climate Scientist

Inez Fung

University of California, Berkeley

Typhoon Days

“When I was growing up in Hong Kong, I memorized the signals that showed typhoons were coming. I loved the wind, rain, and waves. And when typhoons hit, school was canceled,” Inez Fung says. This future climate scientist also loved exploring the beach, swimming in the sea, and staring up at the clouds. Her love of math started in elementary school. It paid off in college, when a professor introduced her to meteorology and to using math to explain the weather.

Long-term Forecast

Today Inez is famous for her computer simulations of Earth’s carbon cycle and how it affects the climate. She’s the first scientist to show that the increasing carbon dioxide (CO₂) in the atmosphere comes from sources such as power plants, car exhaust, and forest fires. And she’s the first to show where some of it goes—into trees, soil, and the ocean. It’s a huge task, but Inez is determined to find out just how fast this gas is causing the air around our planet to warm up.

A climate scientist studies how and why weather patterns change over long periods of time across the entire globe. Inez uses data from the atmosphere, land, oceans, and living things to study the factors that cause the climate to change. She also creates mathematical models to predict future climates. Other **climate scientists**

- > examine the most effective ways to control greenhouse gases, such as carbon dioxide.
- > use satellites in space to study clouds.
- > forecast weather using satellites and high-speed computers.
- > use past climate trends to predict future climate changes.



“I decided to apply mathematics to the future of climate and the future of the planet.”



Inez completed high school in Hong Kong and then came to the U.S. for college.

After you read about Inez Fung, do these activities.

Source or Sink?

Inez knows a lot about Earth's carbon cycle. She has figured out many of the sources and sinks of carbon dioxide (CO₂)—the places it's released and the places it's stored. Imagine you are a research assistant for Inez. Your job is to identify CO₂ sources and CO₂ sinks. Identify each thing on this list as a source or sink of CO₂ and explain the reason.

1. Appliances: _____

2. Plants: _____

3. Fossil fuels: _____

4. Phytoplankton: _____

5. Animals: _____

6. Wind-powered energy: _____

Rain, Rain Gone Away

What would happen if precipitation patterns where you live changed as a result of global warming? Say rainfall decreased by 50 percent and stayed at that level. How would it affect plants and animals? Lakes and rivers? Your community's water supply? Write a paragraph about the possible impacts.
