

Is There a Storm in Your Future?

Does your heart beat faster during a thunderstorm? Do you study photos of tornado destruction? Do you wonder what happens inside a hurricane? If you're crazy about storms, there's a weather career for you.

Hunting Hurricanes

Pilots called hurricane hunters fly airplanes through hurricanes and tropical storms. They brave the wind and rain to gather information for scientists and forecasters at the National Hurricane Center. The crew includes a pilot, a co-pilot, a research meteorologist, a navigator, and a safety officer.

They drop sensors that measure wind speed and wind direction. The sensors also measure the air pressure, humidity, and temperature inside the hurricane. This data helps scientists understand the structure and energy within hurricanes. It shows them how hurricanes form and grow. The data also helps engineers design buildings that will survive storms.



Tracking Tornadoes

Scientists also want to know more about tornadoes. Why do they happen? What makes them strong?

Each spring, researchers travel to the Midwest to an area called "tornado alley." They observe and measure the structure of tornadoes. These tornado chasers use satellites, radar, and weather reports to guide them to thunderstorms that are likely to form tornadoes. Then they get into specially equipped vans topped with radar dishes, radio antennae, and cameras. They try to race ahead of the storms with instruments to take measurements when a tornado blows by. If they're lucky, they're able to collect information that helps forecasters give better warnings.



Making Models

Meteorological programmers design computer models to understand how future storms will behave. The programmer enters data from scientists' measurements of past storms into math equations. The computer solves the equations and creates a model that shows the growth and movement of the storm. The programmer then puts each new storm's "real-time" data into the equations to make predictions.

These models help meteorologists predict dangerous weather in your neighborhood, so you know when to take cover.

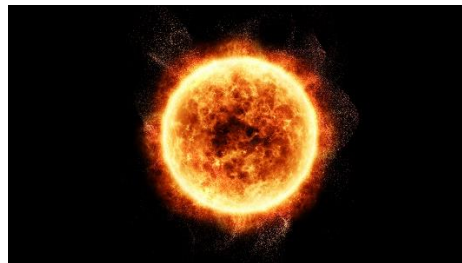


Watching Space Weather

Did you know that the sun has weather too? Space weather forecasters watch solar weather with satellites and radio telescopes.

Solar wind, solar flares, and other space weather can interfere with the technology we use every day. Their magnetic energy interferes with television satellites, cell phone signals, and power grids. They also interfere with satellite radio signals that are used by ships and airplanes.

Space weather forecasters are able to tell people when to expect solar storms, up to five to seven days ahead. Then satellites can be turned off, power stations can switch to alternate sources, and pilots can use other tools to land safely.



Snapping Storms

Weather photographers travel around the country taking pictures and videos of clouds, hurricanes, and blizzards. Finding storms is the easy part. But it takes practice to photograph a black funnel cloud in a dark sky!

Weather photographers sell their images to magazines, website owners, and filmmakers. That way, everyone can enjoy the beauty of storms.