

What is a Hurricane?

Hurricanes are severe storms that form in the tropical oceans. They are low-pressure systems that rotate counterclockwise (in the Northern Hemisphere) around an “eye.” The eye is the relatively calm center of a hurricane, usually 20-40 miles across. Hurricanes can form in the North Atlantic Ocean, the Northeast Pacific Ocean, or the South Pacific Ocean. Once these tropical storms reach 74 miles per hour (mph), they are called hurricanes and can produce torrential rains and floods, tremendous waves, and violent winds.

In different parts of the world, hurricanes can have different names: Typhoon, Tropical Cyclone, and severe Cyclonic Storm. In the North Atlantic Ocean, the United States can be affected by hurricanes from Texas to Maine. There are typically six Atlantic hurricanes every year. If the hurricanes make landfall, storm surges can damage entire coastal cities with strong winds and heavy waves. These landfall storm surges are very dangerous and the major reason why people should stay away from the ocean during a hurricane.

Hurricane development can be classified into 3 main systems:

- **Tropical Depression:** an organized system of clouds and thunderstorms with a defined surface circulation and maximum sustained winds of 38 mph or less
- **Tropical Storm:** an organized system of strong thunderstorms with a defined surface circulation and maximum sustained winds of 39-73 mph
- **Hurricane:** an intense tropical weather system of strong thunderstorms with a well-defined surface circulation and maximum sustained winds of 74 mph or higher

Hurricanes are categorized by their wind speeds, based on the Saffir-Simpson Hurricane Scale. This scale is a 1-5 rating based on a hurricane's intensity, used to give an estimate of the potential property damage and flooding expected along the coast from a hurricane landfall. A **Category 1** storm has the lowest wind speeds (74-95 mph), while a **Category 5** hurricane has the strongest (≥ 156 mph). However, these are relative terms, in that the damage caused by even a category 1 storm can be great if it is near an urban center or populated coastal area. In fact, even tropical storms can cause great damage and loss of life due to flooding.

Click this cool link to see an animation from NASA's Observatorium on the formation of a hurricane: <http://observe.arc.nasa.gov/nasa/earth/hurricane/form.html>

Sources: National Oceanic and Atmospheric Administration, <http://www.noaa.gov>
NASA's Observatorium, <http://observe.arc.nasa.gov/nasa/earth>