

Name: \_\_\_\_\_

# Hurricanes: Nature's Wildest Storms

by Erin Ryan

You may already know that hurricanes are major tropical storms that can cause devastating waves, wind, and rain. They happen during "Hurricane Season," which is from June 1<sup>st</sup> until November 30<sup>th</sup> in the Atlantic Ocean and from May 15<sup>th</sup> until November 30<sup>th</sup> in the Pacific Ocean. A hurricane that forms in the Atlantic Ocean begins as tropical disturbance. This is a large area of windy thunderstorms that forms over the warm ocean, near the equator. When the storms grow larger, rains and wind pick up, and the "disturbance" can develop into a full-fledged hurricane.



## Stages of a Hurricane: Simple Storms Grow Into Giants

A storm progresses through four different stages before it is actually considered a hurricane. First is a tropical disturbance, which has thunderstorms and rotating winds, or what scientists call cyclonic circulation. Next is a tropical depression, which is similar to a tropical disturbance, but has winds between 23 and 39 miles per hour. A tropical storm is the next level, which has stronger wind speeds between 40 and 73 miles per hour. Once winds reach 74 miles per hour, the storm is officially classified as a hurricane. The winds pick up energy from the warm surface ocean water.

Hurricanes rotate counterclockwise in the Northern Hemisphere and clockwise in the Southern Hemisphere. Hurricanes can vary in size and can grow to have a diameter of up to 600 miles, which is longer than the entire state of Florida!

As a hurricane crosses over land, it begins to dissipate, or break apart and reduce in strength. This is because it is no longer over the warm ocean water that it needs for energy. At this point, a hurricane can still cause a lot of damage because of high winds, rain, and flooding, but unless it makes its way back over the open ocean, it is downgraded from a hurricane back to a tropical storm.

## Hurricane Dangers



When a hurricane makes landfall, it can be very dangerous along coastlines because of a storm surge, where ocean waters rush onto land. When this is combined with heavy rainfall, there can be devastating floods.

The center of a hurricane is called the eye. While most of a hurricane contains dangerously strong winds, the eye is actually a calm area in the storm. When the eye of a hurricane passes over land, people might think that it's over, but before long the wind and rain increase again as the second part of the hurricane moves through.

# Furious Hurricanes

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## Predicting Hurricanes and Protecting People!

What's the difference between a hurricane watch and a hurricane warning? During a hurricane watch, there is the possibility that a hurricane will make landfall within 36 hours, and people are advised to prepare for a possible storm ahead. When a hurricane warning is issued, a hurricane is definitely on the way, and will make landfall within 24 hours.



The National Hurricane Center, located in Miami, Florida issues watches and warnings before hurricanes approach the coastline. They use computers with satellite images to figure out where and when a hurricane will come on shore. Sometimes, if a hurricane is strong enough, officials may require citizens to evacuate, or leave their homes, and travel to a safer place.

Can you imagine flying a plane through a hurricane? If you're a hurricane hunter, it's your job! Hurricane Hunters, who work for the Air Force Reserve, fly airplanes called WC-130's on weather missions to help the National Hurricane Center make predictions about hurricanes, and gives them the information needed to issue accurate warnings. Pilots determine how fast the winds are blowing, how big the hurricane is, and which direction it's moving. This helps people to be better prepared for hurricanes as they approach shore.

## Categories of Hurricanes

There are five categories of hurricanes, which are based on wind speeds. The categories help to make people aware of how much damage a hurricane may cause because the greater the wind speed, the more dangerous the storm.

### Category 1 – Winds 74 – 95 mph

Winds snap branches, uproot trees, and overturn mobile homes that aren't secured to the ground.

### Category 2 – Winds 96 -110 mph

Winds are strong enough to destroy weak doors and windows, and create 8-foot ocean waves.

### Category 3 – Winds 111 - 130 mph

Intense winds cause major flooding near the coast, which can destroy homes and businesses.

### Category 4 – Winds 131 - 155 mph

Winds are strong enough to destroy some buildings. Causes heavy damages to building roofs.

### Category 5 – Winds greater than 155 mph

Buildings along the shorelines are washed away. Buildings can be completely destroyed.