

Hurricanes

Directions: Read the information, view diagrams and answer the questions in the worksheet.

Hurricane Basics

The ingredients for a hurricane include a pre-existing weather disturbance, warm tropical oceans, moisture, and relatively light winds aloft. If the right conditions persist long enough, they can combine to produce the violent winds, incredible waves, torrential rains, and floods we associate with this phenomenon. Each year an average of ten tropical storms develop over the Atlantic Ocean, Caribbean Sea, and Gulf of Mexico. Many of these remain over the ocean. Six of these storms become hurricanes each year. In an average 3-year period, roughly five hurricanes strike the United States coastline, killing approximately 50 to 100 people anywhere from Texas to Maine. Of these, two are typically major hurricanes (winds greater than 110 mph).

What is a Hurricane?

A hurricane is a type of tropical cyclone, which is a generic term for a low pressure system that generally forms in the tropics. The cyclone is accompanied by thunderstorms and, in the Northern Hemisphere, a counterclockwise circulation of winds near the earth's surface.

Tropical cyclones are classified as follows:

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 according to the strength of their winds using the Saffir-Simpson Hurricane Scale. A Category 1 storm has the lowest wind speeds, while a Category 5 hurricane has the strongest. These are relative terms, because lower category storms can sometimes inflict greater damage than higher category storms, depending on where they strike and the particular hazards they bring. In fact, tropical storms can also produce significant damage and loss of life, mainly due to flooding.

Hurricane Names

When the winds from these storms reach 39 mph the cyclone is given a name. Years ago, an international committee developed six separate lists of names for these storms. Each list alternates between male and female names. The use of these easily remembered names greatly reduces confusion when two or more tropical cyclones occur at the same time. Each list is reused every six years, although hurricane names that have resulted in substantial damage or death are retired.

Hurricane Bonnie, 1998

