Hurricanes Essay, Research Paper

Hurricanes

A hurricane is one of the most severe storms areas in our country have to endure. They can easily damage millions of dollars of property and even kill anyone in their paths. A hurricane is a tropical low pressure area and has winds over 74 miles per hour (120 kilometers per hour). Hurricanes are formed when heat is released as large quantities of water vapor condense. When the heat is released, it warms the air and reduces the air pressure near the surface of the ocean. This causes air to flow rapidly inward. As the winds become circular around this area of low pressure, the inflow of air toward the low pressure center is prevented. The spiraling winds then form a vertical cylinder extending upward for several miles. Most hurricanes originate within the doldrums and travel across the warm ocean waters while building up energy and strength. After they hit land they begin to lose speed and die off due to friction. In the Northern Hemisphere hurricanes usually travel first in a northwestern direction and in the higher latitudes turn toward the northeast. In the Southern Hemisphere the usual path of a hurricane is first to the southwest and then turning toward the southeast.

Hurricanes are characterized by strong winds and pouring rain. Thunderstorms and waterspouts appear in the storm’s cloud system. All hurricanes contain an eye. The eye of a hurricane is a low pressure, calm area in the middle of the storm. The air in the eye is sinking and this causes there to be no rain in this area and little wind. This gives the impression that the storm has passed through. It is not safe yet though. Within a few hours depending on the size of the hurricane the other side of the storm will sweep through an area with the same force as the front end. Around this eye is a ring of intense thunderstorms that whirl around the eye. This is called the eye wall.

All hurricanes also have a storm surge. The storm surge often causes the most damage on things. A storm surge is a dome of water that sweeps across the coast near a hurricanes landfall. One forms when the hurricane piles up along the shore and blows it inland. A storm surge is most destructive during high tide. Because of this, the surge height is measured from the normal high tide mark.

To help minimize the death toll and property damage the National Hurricane Center tracks all known storms and tries to alert neighborhoods in danger of being hit. They use radar, sea-based recording devices, and geosynchronous weather satellites to detect these storms. If they feel an area is in danger they will issue a Hurricane Warning. A hurricane warning means that hurricane conditions are expected within the next twenty four hours. You may also be able to predict a hurricane by a few well-known signs. First comes dull red sunsets, caused by a thin layer of clouds. The air may become hot and sticky. The wind dies down and the air pressure rises. As the storm moves closer the barometer will drop suddenly. Rain clouds may rush forward from the horizon and the “smell” of rain is in the air. Scientist fly helicopters into the hurricanes to measure the velocity of the wind, the size and location, the pressures inside the storm and the thermal structure. The measurements allow scientist to learn more about them and maybe learn a better way to predict them.

Hurricanes are classifies in many ways. They are measured to find their intensity. The Saffir-Simpson Scale is used for this. A hurricane is rated on a scale from one to five, one being the least severe, and getting more intense as the rating increases. A class 1 hurricane has a maximum speed between 74 and 96 miles per hour, and has a minimum surface pressure greater than 980 millibars. It storm surge is three to five feet. A class five hurricane has a maximum speed of 156 miles per hour or greater, a minimum surface pressure of less the 920 and a storm surge of nineteen feet or over. In order to be able to keep a record of hurricanes they had to come up with a system to name them. Before 1953 there was not any system in use to name hurricanes and can only be identified by its dates. Between 1953 and 1979 hurricanes were given female name. Starting in 1979 the National Weather Service began practicing the use of using male and female names. There were two sets of six lists created to name a hurricane. One list was to be used for Atlantic Hurricanes and the other list was for the Pacific. They were to be used for six years and then repeated. Each name on the lists used a different letter and alternated between male and female names. If a particular hurricane was really exceptional then they might retire its name and replace it with a new name on the list. The letters “Q”, “U”, “X”, “Y”, and “Z” were not used on the list. Since 1954, forty names have been retired and replaced.

Hurricanes are one of the most severe storms on Earth. Any hurricane can cause death and millions of dollars in damage. Even class 1 hurricanes should be taken seriously and the proper procedures should be taken. You should stayed tuned to the TV or radio for updated information from the National Hurricane Center and the National Weather Service. Take shelter and bring a supply of food and a first aid kit.