

Article of the Week for the Week of September 18, 2017

Due Friday, September 22, 2017

_____/20 points

1. Diffuse the text. (4 points)
 - a. Underline any unfamiliar words
 - b. Use context clues to help find the meaning
 - c. Think of two possible substitutions (synonyms) for at least two unfamiliar words
 - d. Confirm your definition by checking a dictionary or thesaurus
2. Write 3+ thoughts in the margin to show your thinking while you read. (6 points)
3. Write a 5 - 7 sentence paragraph **summary** of the article. (10 points)

What is a hurricane?

By NASA.gov, adapted by Newsela staff, 10/10/2016

Hurricanes are large, swirling storms with strong winds. Hurricanes can blow up to 119 kilometers (km) per hour (74 miles per hour) or higher. That's faster than a cheetah, the fastest animal on land.

The storms form over warm ocean waters and sometimes strike land. When a hurricane reaches land, it pushes a wall of ocean water ashore. This wall of water is called a storm surge. Along with heavy rain, it can cause flooding, especially near the coast.

Once a hurricane forms, weather forecasters predict its path and how strong it will get. This information helps people prepare for the storm before it arrives.

How Are Hurricanes Categorized?

A hurricane is categorized by its wind speed using the Saffir-Simpson Hurricane Scale.

Category 1: Winds 119 to 153 km per hour (74 to 95 mph) — faster than a cheetah

Category 2: Winds 154 to 177 km per hour (96 to 110 mph) — as fast as or faster than a baseball pitcher's fastball

Category 3: Winds 178 to 208 km per hour (111 to 129 mph) — similar, or close, to the serving speed of many professional tennis players

Category 4: Winds 209-251 km/hr (130 to 156 mph) — faster than the world's fastest rollercoaster

Category 5: Winds more than 252 km pr hour (157 mph) — similar, or close, to the speed of some high-speed trains

What Are the Parts Of A Hurricane?

Eye: The eye is the "hole" at the center of the storm. Winds in the eye are light and skies are only partly cloudy, sometimes even clear.

Eye wall: The eye wall is a ring of thunderstorms swirling around the eye. The wall is where winds are strongest and rain is heaviest.

Rain bands: Spiral bands of clouds, rain and thunderstorms extend out from a hurricane's eye wall. These bands stretch for hundreds of miles and sometimes contain tornadoes.

How Does A Storm Become A Hurricane?

A hurricane starts out as a tropical disturbance. This is an area over warm ocean waters where rain clouds are building. A tropical disturbance sometimes grows into a tropical depression. This area of rotating thunderstorms has winds of 62 km per hour (38 mph) or less. A tropical depression becomes a tropical storm if its winds reach 63 km per hour (39 mph). A tropical storm becomes a hurricane if its winds reach 119 km per hour (74 mph).

What Makes Hurricanes Form?

Scientists don't know exactly why or how a hurricane forms. But they do know that two main ingredients are necessary. First, hurricanes need warm water, and second, they need winds that have the same direction and speed as they rise higher in the atmosphere.

Warm ocean waters provide the energy needed for a storm to become a hurricane.

How Are Hurricanes Named?

Hurricanes are named, because more than one may exist at the same time. Names also make it easier to keep track of and talk about storms.

A storm is given a name if it becomes a tropical storm. That name stays with the storm if it goes on to become a hurricane.

Each year, tropical storms are named in alphabetical order as they occur. Matthew is a huge, devastating hurricane that struck in October 2016. Before Matthew was Hurricane Lisa. After Matthew is Hurricane Nicole.

There are six lists of names. Each year starts with the next list. The same lists are reused every six years. Names of storms that are very deadly or do much damage are removed from the lists and replaced with new names.

How Does NASA Study Hurricanes?

NASA satellites take pictures of hurricanes from space. NASA scientists collect information on clouds, rainfall, wind and the temperature at the oceans' surface. It helps them understand how hurricanes form and get stronger. The data also helps weather forecasters predict the path and strength of hurricanes.

Did you know that dust storms from Africa might affect hurricanes? NASA's Terra and Aqua satellites have a tool that tracks dust coming off of Africa. It helps scientists study the effects of dust on the way hurricanes form and get stronger.

NASA research aircraft fly into and above hurricanes to gather information about the storm. NASA has also flown an unmanned aircraft into areas of a hurricane that are too dangerous for manned aircraft.

NASA has also created computer animations of hurricanes using information about rain, wind and temperature from satellites. They help forecasters better predict storm damage.