**Extreme Weather WebQuest**

**Use assigned Discovery Education Board to Complete this Webquest.**

**Review:**

[**http://www.weatherquestions.com/What\_is\_an\_air\_mass.htm**](http://www.weatherquestions.com/What_is_an_air_mass.htm)

1. What is an air mass?
2. What is the difference between a tropical and polar air mass?

[**http://www.weatherquestions.com/What\_causes\_high\_pressure.htm**](http://www.weatherquestions.com/What_causes_high_pressure.htm)

1. What causes an air mass to have high pressure?

[**http://www.weatherquestions.com/What\_causes\_low\_pressure.htm**](http://www.weatherquestions.com/What_causes_low_pressure.htm)

1. What causes an air masse to have low pressure?

**Warm Fronts:** [**http://ww2010.atmos.uiuc.edu/(Gh)/guides/mtr/af/frnts/wfrnt/def.rxml**](http://ww2010.atmos.uiuc.edu/(Gh)/guides/mtr/af/frnts/wfrnt/def.rxml)

1. When a warm front moves through an area, what will happen to the temperature?
2. Look at the first diagram.  There are two temperatures written in blue (28 and 31).  These numbers will change once the warm front moves through.  What do you think the temperatures will change to?  Why?

**Cold Fronts:** [**http://ww2010.atmos.uiuc.edu/(Gh)/guides/mtr/af/frnts/cfrnt/def.rxml**](http://ww2010.atmos.uiuc.edu/(Gh)/guides/mtr/af/frnts/cfrnt/def.rxml)

1. When a cold front moves through an area, what will happen to the temperature?
2. Look at the first diagram. There are two temperatures written in red (55 and 62). These numbers will change once the cold fronts moves through. What do you think the temperatures will change to? Why?

**Thunderstorms:**

[**http://www.weatherwizkids.com/weather-thunderstorms.htm**](http://www.weatherwizkids.com/weather-thunderstorms.htm)

1. What is a thunderstorm and how does it form?
2. Where and when can thunderstorms occur?
3. How are thunderstorms measured, detected and forecasted?
4. What kind of clouds produce thunderstorms?
5. What causes lightning?
6. What causes thunder?
7. How can you tell how far away a storm is?
8. What kind of damage can thunderstorms create?

**Hurricanes:**

**http://www.weatherwizkids.com/weather-hurricane.htm**

1. Explain how Hurricanes form.
2. Explain “Storm Surge”
3. How do hurricanes get their names?
4. What are the characteristics of a category 5 hurricane?

**http://www.nhc.noaa.gov/**

1. When is Hurricane season for the East Coast?
2. What active tropical cyclones are present in the Atlantic Ocean at this time?

**Hurricane Sandy Video**

1. In this video, it shows you footage of Hurricane Sandy. A gentleman in the video talks about there being 15 people on top of a building that didn’t jump into the water. Why did they not jump?
2. What were some of the consequences of the Hurricane besides just flooding?
3. What are three things that might happen if we were to lose power?

**Tornadoes:**

**http://www.weatherwizkids.com/weather-tornado.htm**

1. Explain how tornadoes form.
2. What conditions are needed for tornadoes to form?
3. Where are tornadoes most likely to occur?
4. What scale is used to categorize tornadoes?
5. Describe an F5 tornado.

**Tornado Video**

1. What two air masses collided together to form this Tornado in Oklahoma?
2. Draw a Venn Diagram comparing the roles of Storm Chasers and Meteorologists.  Make sure to tell why they are both important.

**Blizzards:**

**http://www.weatherwizkids.com/weather-winter-storms.htm**

1. How do blizzards form?
2. Describe how you would prepare for blizzard?

**Blizzards Video**

1. Which environment is hit by some of the most powerful blizzards on Earth?
2. What are the two most dangerous ingredients on a mountain?
3. If you were stuck in a blizzard, what would you most likely die from?
4. What happens to your blood vessels during a blizzard?
5. If you were about to die from being in a blizzard, what type of shelter would you try to create in order to survive?

**Floods:**

**http://www.weatherwizkids.com/weather-rain.htm**

1. What is the difference between a flood and a flash flood?
2. What is the #1 weather related killer in the US?
3. How much water does it take to make a car float?
4. Create a Flood Safety Plan
   1. Before Flood:
   2. During Flood:
   3. After Flood:

**Floods in the World Video**

1. While watching this video, write down five different structures that are impacted by flooding.

**Flash Floods Video**

1. What are the **most** dangerous floods called?
2. Where do these **most** dangerous floods occur?
3. What is the 2nd most driest city in America?
4. How much water is considered enough to sweep you off your feet?
5. If you were trapped on top of your car during a flash flood, how would you escape to safety? **List two different ways.**