

# Weather Patterns and Severe Storms

## Webquest

### What is wind?

<http://www.weatherwhizkids.com/weather-wind.htm>

1. How is wind produced?
2. What causes the wind to blow?
3. What is the jet stream?
4. Draw and label the diagram of the Earth's global wind patterns
5. What are the doldrums?

### What is an air mass?

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

6. What is an air mass?
7. What is the difference between a tropical and polar air mass?

### What Causes High Pressure?

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

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

### What Causes Low Pressure?

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

9. What causes an air mass 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)

10. When a warm front moves through an area, what will happen to the temperature?
11. 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)

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

## Occluded Fronts

[http://www.windows2universe.org/earth/Atmosphere/tstorm/occl\\_front.html](http://www.windows2universe.org/earth/Atmosphere/tstorm/occl_front.html)

14. What is an occluded front?
15. What will happen to the temperature once an occluded front moves through?

## Tornadoes

<http://www.weatherwhizkids.com/weather-tornado.htm>

16. What is a tornado?
17. What weather is needed for a tornado to form?
18. What time of year are tornadoes most likely to occur?
19. Using the Fujita Scale, what are the strongest tornadoes labeled? What are the wind speeds and damages associated with them?

## Tornado Alley

<http://www.tornadochaser.net/tornadoalley.jpg>

20. What 19 states make up tornado alley? (abbreviations are fine)

## Tornadoes in the United States

<http://www.tornadochaser.net/images/frequency.gif>

21. Which state gets the most tornadoes per square mile?

## US Tornado Climatology

<http://www.ncdc.noaa.gov/climate-information/extreme-events/us-tornado-climatology>

22. Where in the world can tornadoes happen?

23. Where in the world are tornadoes most likely to happen?

## **Hurricanes**

<http://www.weatherwhizkids.com/weather-hurricane.htm>

24. How large can hurricanes get and how long do they last?

25. What is the “eye” of the hurricane and what is the weather like inside the eye?

26. Hurricanes form over what type of water conditions?

27. How strong are winds in a category 5 hurricane?

## **Hurricane Watches and Warnings**

<http://www.nhc.noaa.gov/prepare/wwa.php>

28. What is the difference between a hurricane watch and a hurricane warning?

## **Intensity Scales**

<http://www.nhc.noaa.gov/aboutsshws.php>

29. Which intensity scale is used for hurricanes?

30. If a hurricane has wind speeds of 103 mph, what category storm is it?