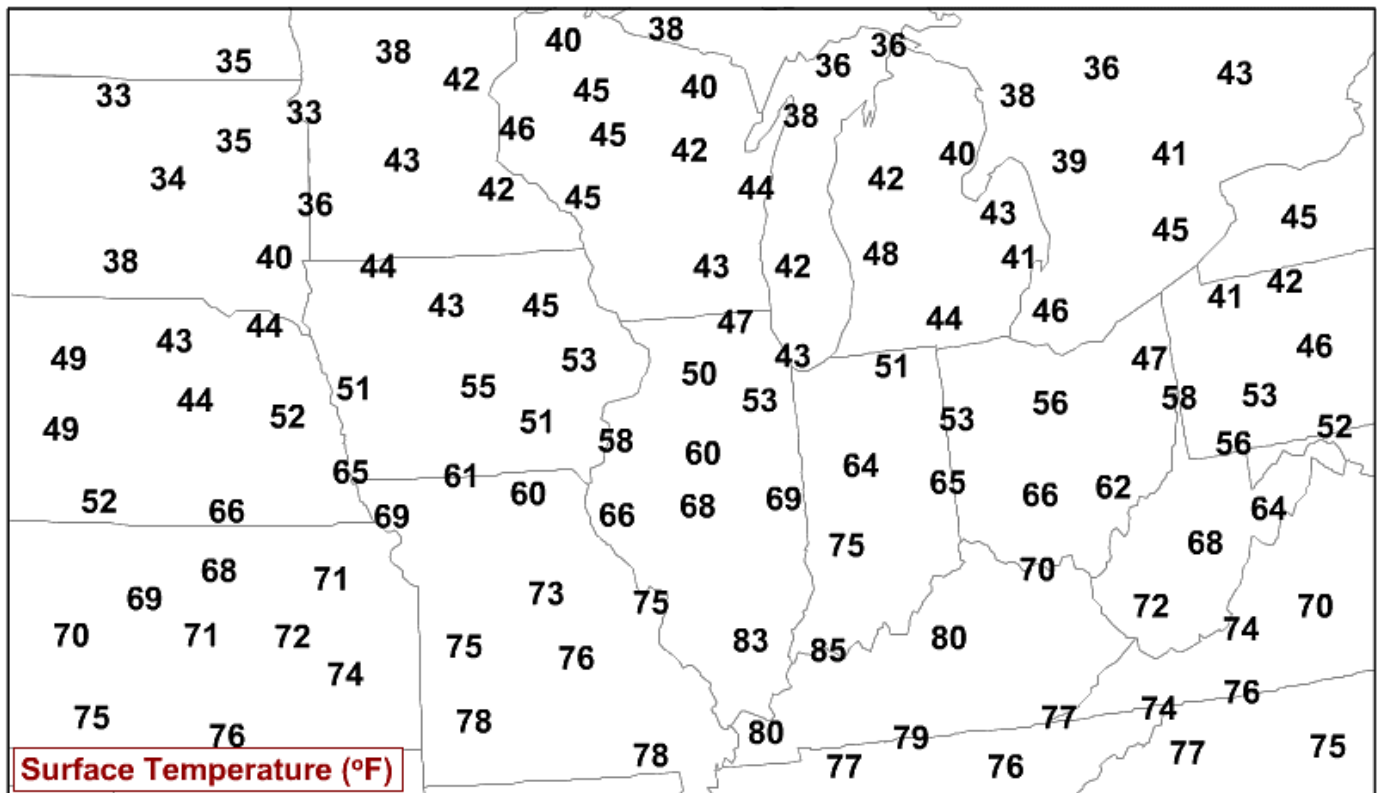


Go to our school website by entering www.lex2.org in the address bar, clicking on "schools," then "Northside Middle School." You will find your weather web quest page by clicking on "Student Links" at the top.

Drawing Isotherms - https://courseware.e-education.psu.edu/public/meteo/meteo101demo/Examples/Images/Section2/contour_tool_t0203.swf

1. Where it says: "**Select isotherm**" Click on the box and choose **50**. Then click "**Draw Line**". Watch as the pencil draws a line.
2. Where are all of the temperatures less than 50° compared to the line? _____
3. Where are all of the temperatures greater than 50° compared to the line? _____
4. Click on the "Select Isotherm" box and choose **80** then click "Draw Line".
5. Where are all of the temperatures above 80? _____
6. Where are all of the temperatures below 80? _____
7. The 80 line is called a **closed** isotherm because it makes a circle.
3. Using the mouse to draw the 40 degree isotherm on the computer screen where you think it should go.
4. Check your work: click on the "**Select isotherm**" box and choose **40 degrees**. Then click "**Draw Line**". Compare your line to the line drawn.
5. Draw in the correct isotherm lines for 40, 50, 60, 70 and 80 degrees below:





Current Isobars - <http://www.atmos.uiuc.edu/weather/tree/viewer.pl?launch/sfcslp>

The white lines on the map are Isobars. They connect areas on a map that all have the same air pressure. These are the current air pressures in the United States right now. How many other states have about the same air pressure as South Carolina? _____ (If SC is in between two lines, then count all of the states in between the same two lines.)

What is the current air pressure in SC? _____ mb (estimate if it is between two lines)

Current Satellite with Isobars - <http://www.atmos.uiuc.edu/weather/tree/viewer.pl?launch/irslp>

What does a satellite view allow you to see? _____

Click *Animate*,  at the bottom of the screen. Choose 96 frames. It will take a little while to load the last 96 hours. After it loads, watch the clouds around “L”s and “H”s after you click play, . Do the clouds move with the “L”s or “H”s? _____ In what general direction do the clouds move? _____

Current Radar - <http://www.intellicast.com/National/Radar/Current.aspx>

Scroll down a bit to see the current radar for the United States. What details can a radar map give that the satellite map didn't? _____

What did a satellite show that a radar map does not show? _____

Weather Instruments <http://www.weatherwizkids.com/weather-instruments.htm>

What do each of the weather instruments below measure or show?

Thermometer _____

Barometer _____

Sling Psychrometer _____

Rain Gauge _____

Wind Vane _____

Anemometer _____

Weather Satellites _____

Weather Questions <http://www.weatherwizkids.com/kids-questions.htm>

Write down three questions from this page that you did not already know the answer to?

1. _____

2. _____

3. _____

Clouds 2 http://upload.wikimedia.org/wikipedia/commons/d/d3/Cloud_types.jpg

11. List the clouds that have *alto* in their name: _____

12. What do you think *alto* means? (What do the *alto* clouds have in common?) _____

13. List the clouds with *cirr* in their name: _____

14. Looking at all of these clouds, what do you think *cirr* means? _____

15. List the two cloud types with *nimb* in their names: _____

16. What do you think *nimb* means? _____

17. Do you think fog is really a cloud? _____ What is different about fog compared to the other clouds?

Wind Patterns – <http://www.weatherwizkids.com/weather-wind.htm>

What is wind?

Wind is air in _____. It is produced by _____

What causes the wind to blow?

Some parts of the Earth receive _____ rays from the sun all year and are always _____. Other places receive indirect rays, so the _____ is colder. Warm air, which weighs less than cold air, _____. Then cool air _____ and replaces the rising warm air.

What is the jet stream?

The jet stream is a fast flowing, _____ found in the atmosphere at around 12 km above the surface. They form at the boundaries of adjacent _____ with significant differences in temperature, such as of the polar region and the warmer air to the south.

What are the trade winds?

The trade winds are just air movements toward the _____. They are warm, steady breezes that blow almost _____. The Coriolis Effect makes the trade winds appear to be curving to the _____, whether they are traveling to the equator from the south or north.

What are the prevailing westerlies?

Between thirty and sixty degrees latitude, the winds that move toward the poles appear to _____. Because winds are named from the direction in which they _____, these winds are called prevailing westerlies. Prevailing westerlies in the Northern Hemisphere are responsible for many of the _____ across the United States and Canada.

What are the polar easterlies?

The polar easterlies form when the atmosphere over the poles _____. This cool air then _____ and _____ over the surface. As the air flows _____ the _____, it is turned to the west by the Coriolis effect.

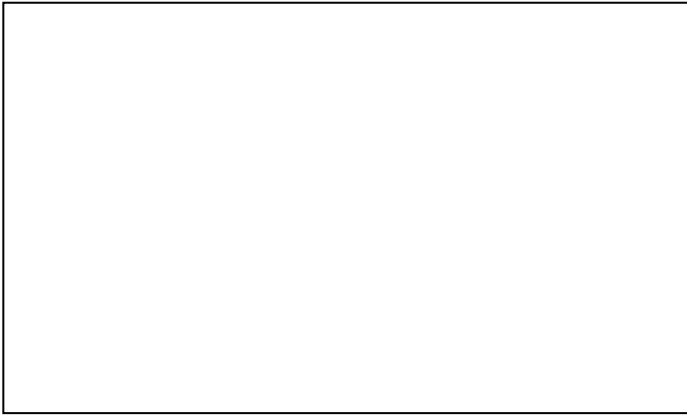
What is a sea breeze?

As air above the _____ surface is heated by radiation from the Sun, it expands and begins to _____, being lighter than the surrounding air. To replace the rising air, _____ air is drawn in from above the surface of the _____.

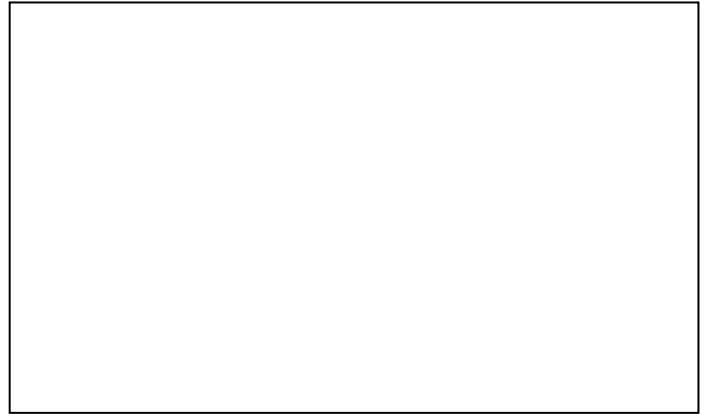
What is a land breeze?

A land breeze occurs at _____ when the land _____ than the sea. In this case, it is air above the warmer surface _____ that is heated and rises, pulling in air from the _____ land surface.

Draw diagrams of the two breezes below. Label “**descending cool air**”, “**rising warm air**”, “**land**”, and “**water**” in each picture. Draw a sun or moon where appropriate and arrows to show direction of air movement.



Land Breeze



Sea Breeze

Reporting the Weather - <http://www.edheads.org/activities/weather/>

1. Click Start.
2. Click on Report Weather. Click on Level One.
3. On a weather map, H symbolizes _____.
4. L symbolizes _____.
5. Draw the symbols for:



A warm front



A cold front

6. Now click on start to put the weather symbols on the map.
7. 11 °F is equal to _____ °C
8. 13 °F is equal to _____ °C
9. 35 °F is equal to _____ °C
10. Now you can print your name, look at your score and move on to Level 2.
11. Now you can print your name, look at your score and move on to Level 3.
 - a. When the _____ front passes through Toledo, there is a chance of rain.
 - b. The _____ pressure system over St. Louis and Springfield is causing cloudy conditions.
 - c. The east coast of Florida will experience a line of _____ caused by a _____ pressure system.
 - d. 65 °F is equal to _____ °C
 - e. 76 °F is equal to _____ °C