HIGH AND LOW PRESSURE SYSTEMS

By the end of this class, you will be able to:
* Compare and contrast high and low pressure systems
* Identify areas of high and low pressure on a weather map
DO NOW: What's in a letter?

Take a moment to think about what each letter stands for when used on a weather map.
Same idea as isotherms and bars

Contour Lines

Equal Elevation

Equal Temperatures

For C

"Iso" means equal

Isotherms

Isobars

Equal Pressure

Millibars
## Compare/Contrast Chart

### High and Low Pressure

<table>
<thead>
<tr>
<th></th>
<th>High Pressure</th>
<th>Low Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type of phenomenon</strong></td>
<td>Weather system</td>
<td>Changes in air pressure</td>
</tr>
<tr>
<td><strong>Determined by</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Moving inward on isobars</strong></td>
<td>Pressure Increases</td>
<td>Pressure Decreases</td>
</tr>
<tr>
<td><strong>Density of air</strong></td>
<td>Higher</td>
<td>Lower</td>
</tr>
<tr>
<td><strong>Representation on a map</strong></td>
<td>H (typically blue)</td>
<td>L (typically red)</td>
</tr>
<tr>
<td><strong>Motion of air</strong></td>
<td>Clockwise, air sinks</td>
<td>Counterclockwise, air rises</td>
</tr>
<tr>
<td><strong>Also known as</strong></td>
<td>Anticyclone</td>
<td>Cyclone</td>
</tr>
<tr>
<td><strong>Motion of air causes a zone of air</strong></td>
<td>Divergence</td>
<td>Convergence</td>
</tr>
<tr>
<td><strong>Stability of atmosphere</strong></td>
<td>Stable</td>
<td>Unstable</td>
</tr>
</tbody>
</table>
High Pressure

Causes of high pressure

Cool air sinks

Earth’s surface

Surface winds spiral outwards

Isobars

What are the weather effects?
Typically these pressure belts bring stable weather conditions:

- clear skies
- sunshine
- dry weather
- high day and low night temperatures
- calm weather
- dew and frost
- fog and mist
LOW PRESSURE

Causes of low pressure

What are the weather effects?

Unstable rising air causes unsettled and changeable weather.

Typically depressions bring:

- cloudy skies
- low levels of sunshine
- wet weather
- temperatures that are mild for the time of year
- windy conditions
- changeable weather.
Low vs. High
Thumbs up for high, Thumbs down for low
Identify one center of high pressure and one center of low pressure using the letters on the map below. Be able to briefly explain your answer.