**7.1 - Weather Systems**

*(keeping it in the Northern Hemisphere)*



|  |  |  |
| --- | --- | --- |
| **HIGH**  | **Anti-cyclone** |  |
| **LOW** | **Depression** |  |

Air masses

|  |  |  |
| --- | --- | --- |
| **Air mass** | **Why Warm/Cold** | **Why Humid/Dry** |
| Warm, dry air |  |  |
| Warm, humid air |  |  |
| Cold, dry air |  |  |
| Cold, humid air |  |  |

Why is warm, humid air less dense than cold, dry air?

|  |  |
| --- | --- |
| Cold, dry air |  |
| Warm, humid air |  |

Typical Depression (Temperate Regions)



Winds tend to blow at approx 15° to the letf of the isobars. Note the anti-clockwise direction.



Vertical Cross-section



|  |  |  |
| --- | --- | --- |
|  | **Change in air temp** | **Typical weather** |
| **WARM FRONT** |  |  |
| **COLD FRONT** |  |  |

How do they form?





The cold front moves faster than the warm front and eventualy catches it up! This produces an OCCLUDED FRONT – yeuky weather.



