ATMOSPHERIC VARIABLES

WHAT WEATHER VARIABLES HELP PREDICT WEATHER?
ATMOSPHERIC VARIABLES

• **TEMPERATURE** - THE HEAT ENERGY PRESENT IN THE ATMOSPHERE AT THAT LOCATION

• INFLUENCES AFFECTING TEMPERATURE ARE SOLAR RADIATION, ANGLE OF INSOLATION, HOURS OF DAYLIGHT, AND REFLECTION OFF THE ATMOSPHERE
ATMOSPHERIC VARIABLES

- AIR PRESSURE - THE FORCE EXERTED ON A UNIT OF AREA BY THE AIR THAT IS EXERTED EQUALLY IN EVERY DIRECTION
  
- AIR IS A MIXTURE OF GASES WITH MOLECULES THAT ARE FAST MOVING AND FAR APART
ATMOSPHERIC VARIABLES

- Air pressure increases as you decrease your elevation
- Air pressure decreases as you increase your elevation
ATMOSPHERIC VARIABLES

- **Air Currents** - Rising or sinking movement of air perpendicular to the ground
- **Wind** - The horizontal movement of air parallel to the earth’s surface
  - Wind blows from areas of high pressure to areas of low pressure
ATMOSPHERIC VARIABLES

• **SEA BREEZE** - DURING THE DAY LAND HEATS UP FASTER THAN THE WATER, THUS CREATING A LOW PRESSURE ZONE OVER THE LAND

• WIND BLOWS FROM AREAS OF HIGH PRESSURE TO AREAS OF LOW PRESSURE
LOWER TEMPERATURE, HIGHER PRESSURE

WARM AIR RISES, COOLS AND DESCENDS

HIGHER TEMPERATURE, LOWER PRESSURE

SEA BREEZE
ATMOSPHERIC VARIABLES

- **Land Breeze** - During the night, land cools faster while water holds its heat, thus creating a low pressure zone over the water.

- **Wind Blows from Areas of High Pressure to Areas of Low Pressure**
LAND BREEZE

Warmer air rises, cools and descends

Higher temperature, lower pressure

Lower temperature, higher pressure