

# Air Pressure and Wind

Goal: Explain the formation of wind based on differences in air pressure

# What is Air Pressure?

- **Reminder:** Air pressure is thickest near Earth's surface and becomes thinner as we move up towards the exosphere
- Air pressure is the pressure you feel from surrounding atmospheric gases.
- To be technical it is the pressure exerted by the weight of the air above.
- **At sea level, the average weight of the air is 1 kilogram per square centimeter**

# Why don't we feel air pressure?

- If air pressure is force that pushes on you, then why don't we collapse as a result of all of that pressure?!
- **Air pressure is exerted in all directions ( down, up, and sideways)**
- This means that the air pressure pushing down on an object perfectly balances the air pressure that is pushing up on an object

# Measuring Air Pressure

- **Air pressure is measured in millibars.** (Just like most temperature is measured in degrees)
- **Sea level pressure is 1013.2 millibars** ( just like body temperature is 97 degrees,
- **Standard Air pressure** is typically described as high or low
- Air pressure is measured using a **barometer** (just like temperature is measured using a thermometer)

# Mercury Barometer

- A tool used to measure air pressure
- When air pressure increases, the mercury in the tube will rise.
- So when air pressure decreases, the mercury in the tube will sink.

