

## 2.1 The atmosphere's air pressure changes.

### REVIEW:

1. The distance above sea level is \_\_\_\_\_.

2. The amount of mass in a given volume of substance is \_\_\_\_\_.

3. The whole layer of air that surrounds Earth is the \_\_\_\_\_.

Air molecules move \_\_\_\_\_. As they move, they bounce off each other like rubber balls. They also bounce off every surface they hit. Each time an air molecule bounces off an object, it pushes, or \_\_\_\_\_ a force, on that object. When billions of air molecules bounce off a surface, the force is spread over the area of that surface. \_\_\_\_\_ is the force of air molecules pushing on an area. The greater the force, the \_\_\_\_\_ the air pressure. Because air molecules move in all directions, air pressure pushes in all directions.

Air pressure \_\_\_\_\_ as you move \_\_\_\_\_ in the atmosphere. Think of a column of air directly over your body. If you stood at sea level, this column would stretch from where you stood to the top of the \_\_\_\_\_. The air pressure on your body would be equal to the weight of all the air in the column. But if you stood on a mountain the column of air would be shorter. With less air above you, the pressure would be \_\_\_\_\_. At an altitude of 5.5 kilometer (3.4 miles), air pressure is about half what it is at sea level.

Air pressure and \_\_\_\_\_ are related. Just as air pressure decreases with altitude, so does the \_\_\_\_\_ of air. The air at sea level is \_\_\_\_\_ than air at high altitudes.

Answer the following questions after watching the video.

1. What gives wind its mass?
2. What 3 things make air pressure change?
3. What is a convection cell?
4. What is the Coriolis Effect?
5. What causes wind?

Air pressure is measured by a \_\_\_\_\_.

Types of global wind belts

### **Calm Regions:**

The doldrums are a \_\_\_\_\_ near the equator. There warm air rises to the top of the troposphere. Then the air spreads toward the \_\_\_\_\_. The rising, moist air produces clouds and heavy \_\_\_\_\_.

During the hottest months, heavy evaporation from warm ocean water in the region fuels \_\_\_\_\_ storms.

The \_\_\_\_\_ Latitudes:

are \_\_\_\_\_ located about 30 degrees north and 30 degrees south of the \_\_\_\_\_. Warm air traveling away from the equator cools and sinks in these regions. The weather tends to be clear and \_\_\_\_\_.

**Wind Belts:**

**Trade Winds:**

**Westerlies:**

**Easterlies:**

What are jet streams?