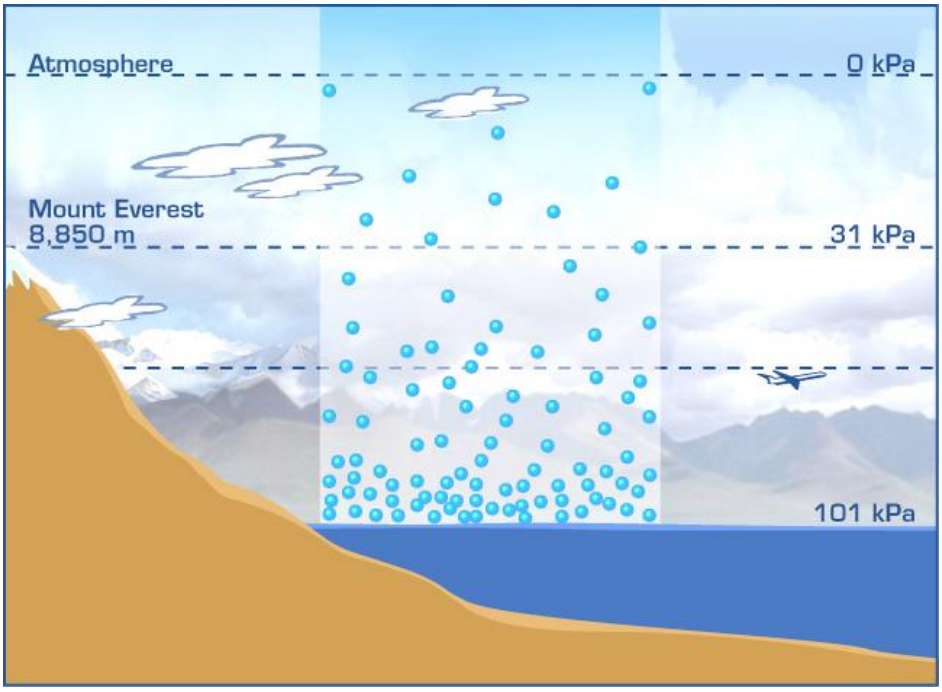
Name _____ Date _____ Period _____

Air **PRESSURE** and Density

Activity 1 – What's in the air?

Use the image to answer the following questions.



1. If you were on a boat in the water's surface, how much is the air pressure? (Look for the kilopascals symbol kPa)

2. If you climbed to the top of Mount Everest, how much is the air pressure?

3. What happens to the amount of air molecules as your increase (go up) in altitude?

4. Explain where the air is denser (more). This needs to be a complete sentence.

5. Explain where the air is less dense. This needs to be a complete sentence.

6. Predict why it would become difficult to breathe as you climb up Mount Everest. This needs to be a complete sentence or two.

Activity 2 – History of the Barometer Video

Go to dixiemiddlescience.weebly.com and scroll to today's date. Click on the box that says "HISTORY OF THE BAROMETER VIDEO". Answer the following questions while observing the TedEd video.

1. What can happen if there is a sudden shift in air pressure?

2. How was the first vacuum created?

3. Explain 2 difficulties early scientists, like Galileo, had to overcome to create the first barometer.

4. How does a barometer work?

5. Predict why it took many trials to make the first barometer?

Activity 3 – Atmospheric Data

Go to dixiemiddlescience.weebly.com, then scroll to today's date. Click on the box that says "ATMOSPHERIC DATA" http://www.glencoe.com/sites/common_assets/science/virtual_labs/ES14/ES14.html - use the pink arrow to increase or decrease the altitude and then launch to gather the data for that altitude to complete the following data table.

Altitude	Density	Pressure	Temperature
0 km			
10 km			
25 km			
50 km			
60 km			
75 km			
100 km			
150 km			
200 km			
400 km			

1. What happens to the density of the air as altitude increase?

2. What happens to the pressure as altitude increases?

3. What happens to the temperature as altitude increase?

4. Predict what may be causing this pattern.